

# CALIFORNIA AND WESTERN MEDICINE

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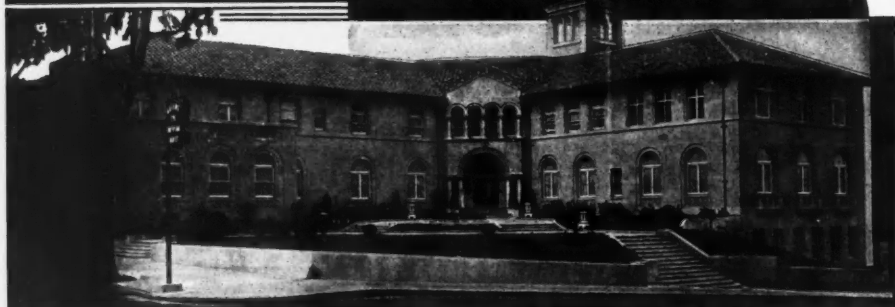
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EDWARD M. PALLETTE, M. D.  
*President, California Medical Association*

1937



# CALIFORNIA AND WESTERN MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

VOL. 46

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NO. 4

## SALUTATION FROM PRESIDENT PALLETTE

To the Members of the California Medical Association and their friends, your Officers and Committee Members extend a cordial greeting.

We are most fortunate this year that the Association is holding its sixty-sixth annual meeting in one of the most delightful places in all America. Monterey, this first capital city of California, with its surroundings, constitutes a spot unsurpassed in all the world for scenic beauty, historic interest and facilities for hospitality.

Monterey is the very cradle of Californian history. Viscaino landed here in 1602 and took possession in the name of the King of Spain. In 1821, Monterey became the capital of the Mexican Province of California. The first Constitution of the American State of California was framed here in the first capitol, Colton Hall, still standing, in September, 1849. Other historic buildings still to be seen here are the house of Governor Alvarado, the Presidio chapel, General Sherman's headquarters, the Larkin House, Robert Louis Stevenson's home, the first United States Customs House, and the first theater in California, where many noted actors appeared before and during the days of the gold-rush. Then there are the famous Seventeen-Mile Drive, Pebble Beach, Carmel, and Carmel Mission where Junipero Serra is buried. The numerous unexcelled golf courses in the neighborhood will appeal to many of our members. Hotel Del Monte, the meeting headquarters, has been well referred to as "the world's best-loved resort."

Several objectives are to be aimed at in a meeting of this kind. The opportunity of meeting colleagues and renewing old friendships is most valuable. Doctors who are acquainted are usually good friends. The solidarity of organized medicine is thus increased. Our health, both physical and mental, must be benefited by even a short period of relaxation from the responsibilities of practice. The consideration of the problems of medical economics and public relations is important.

After all, however, the presentation and discussion of the problems of the strictly scientific side of our profession is probably the most important. Much credit is due the Committee on Scientific Program, and to the writers of papers and their discussants for the preparation of the following program. The Section Officers have done their work well.

Those in charge have done their utmost with the hope that you will spend a most comfortable and enjoyable few days at Del Monte. The attendance should be large.

May all Association members, including those of the Auxiliary and their friends in attendance, have a most profitable and a most enjoyable time!

Cordially yours,

EDWARD M. PALLETTE.

## California and Western Medicine

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Address editorial communications to Dr. George H. Kress as per address above; advertising and business communications to Secretary-Treasurer, Dr. Frederick C. Warnshuis, also at above address.

EDITOR . . . . . GEORGE H. KRESS

**Advertisements.**—The Journal is published on the seventh of the month. Advertising copy must be received not later than the fifteenth of the month preceding issue. Advertising rates will be sent on request.

**BUSINESS MANAGER .** FREDERICK C. WARNSHUIS

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**Change of Address.**—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

**Responsibility for Statements and Conclusions in Original Articles.**—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the Journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

**Contributions—Exclusive Publication.**—Articles are accepted for publication on condition that they are contributed solely to this Journal. New copy must be sent to the editorial office not later than the fifteenth day of the month preceding the date of publication.

**Contributions—Length of Articles; Extra Costs.**—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

**Leaflet Regarding Rules of Publication.**—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this Journal write to its office requesting a copy of this leaflet.

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## EDITORIALS†

**ANNUAL SESSION, CALIFORNIA MEDICAL ASSOCIATION: HOTEL DEL MONTE, MONTEREY COUNTY, MAY 2-6, 1937**

**The Sixty-sixth Annual Session of the California Medical Association.**—Again a work-year, the sixty-sixth of the California Medical Association, is approaching to its close, to be marked by the 1937 annual session in Monterey County, with central headquarters at the world-famed Hotel Del Monte. As in previous years, attention is called to a splendidly arranged program of interesting events of importance to physicians who practice in California; and all who can arrange their professional responsibilities should make an effort to be in attendance.

It is not necessary to recapitulate the many advantages—professional and fraternal—which members of the Association who join with their fellows in making up the scientific and other assemblies may derive from social contacts and exchange of thought. Physicians who have acquired the annual session habit do not need to be reminded of the benefits and pleasures already and always experienced; but members who never, or only rarely, go to such gatherings may well consider the good to be obtained.

\* \* \*

**Scientific Program and Pre-Convention Bulletin Printed in the Supplement.**—This year, the scientific program and Pre-Convention Bulletin will be found in a Supplement to the OFFICIAL JOURNAL. The Council approved the plan\* for such a supplement in the hope that the new arrangement would not only make for more convenient reference, but bring more prominently to the attention of members the annual session's near approach, thereby promoting a greater and healthier interest, and a larger attendance.

The list of papers announced by the twelve scientific sessions, and the important subjects to be considered, are well worthy of inspection. For those who, in addition to participating in the extensive programs, would have social relaxation, the Monterey Peninsula, with its historical background, its literary associations and scenic lure, offers unusual facilities for recreation.

\* \* \*

**Hotel Reservations and Railroad Information.**—Hotel reservations have been placed in charge of a central agency—the Hotel Del Monte—acting not only for itself, but for other caravansary establishments in the Monterey district. A list of these hotels is given in the Supplement under the caption, "Hotel Information." Members, therefore, who have not yet secured reser-

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column which follows.

\* See Council minutes, March, 1937, page 189, item 2.

vations, and who plan to go to Del Monte by auto, should look over the names in advance. Under the heading, "Railroad Information," are given the schedules in operation at this writing; but since new time tables are anticipated about April 1, check should be made on the announcements at the time when tickets are purchased. A reduced rate will be available, but only for those who, through their respective county society secretaries, secure in advance the proper transportation slips.

The group of distinguished guest speakers who will come from other states to address the general and special meetings, the scientific programs of broad scope, and also the entertainment features, should make the Del Monte annual session of May 2-6, 1937, measure up to the highest standards of conventions ever held there. The officers of the Association sincerely hope that the session will be marked by both banner attendance and a record of much good work accomplished.

#### STATUS OF BILLS BEFORE THE LEGISLATURE

**Two Hundred and Fifty Public Health Measures.**—In previous issues it was stated that, among the 4,000 bills submitted to the Fifty-second California Legislature, now in session, more than 250 deal with public health matters. These bills were introduced in the month of January; and at this time, in the third week of the second period of the legislative session, are under consideration in some twenty-four committees. It is not possible, therefore, to prognosticate their ultimate fate; and until the Legislature adjourns it will be as important as ever for all County Committees on Public Policy and Legislation to be alive to their responsibilities when called upon for aid by the State Committee. For the information of members we append some notations compiled from reports received from the Committee on Public Policy, showing the status of some of the measures at the time of this writing:

**County Hospitals.**—Assembly Bill 51, by Assemblyman Heisinger of Fresno, which would open up county hospitals, was tabled by the Assembly Committee on County Government, following a hearing on March 16. Through the Association of California Hospitals, powerful opposition was registered with the committee and the bill was tabled. There are two remaining county hospital bills to be considered at a later date. A Senate Constitutional Amendment, No. 5, which would submit the subject of wide-open county or city hospitals to the people for a vote, will be considered by the Senate Committee on March 25.

**Code Bills.**—The bills prepared by the California Code Commission, to codify the existing laws relating to Medical Practice, Dental Practice, Nursing, Trained Attendants, Ophthalmia Neonatorum, and Medical Library, have been favorably reported by the Senate Committee, and are now before the Senate for passage.

**Optometry Bills.**—On March 15, there was a lively fight in the Assembly Committee on medical and dental laws, concerning Assembly Bills 1137 and 1143, inclusive, introduced by the State Board of Optometry and the Optometry Association. Through strenuous opposition, it was possible to amend out provisions which invaded the practice of medicine and gave extended rights to optometrists. Along this same line, Assembly Bill 1676, providing for a division in the State Department of Education to set up audiometer tests in all school districts, was satisfactorily amended.

**Osteopathic Bills.**—The osteopaths have been especially active during this session of the Legislature, and their committees called upon practically every member of the Legislature during the February recess. There are a number of bills which relate to this subject, and Assembly Bill 1880, giving osteopaths the right to serve as physical inspectors in schools, is set for a hearing before the Assembly Committee on Education on March 23.

**Chiropractic Bills.**—The chiropractors, also, have been active, this time in behalf of a constitutional amendment to extend their powers. This comes up for final hearing in committee on March 22. The Naturopathic Bill is still resting in committee.

**Health and Hospital Insurance.**—No action has been taken in committee on the Williams Bill (Senate Bill 121) or the McGovern bill (Senate Bill 605). The Williams bill has been set for hearing before the Senate Committee on Insurance on March 29. Assembly Bill 1132, sponsored by the Association of California Hospitals and designed to provide hospitalization insurance, has been extensively amended by its sponsors and will come up for hearing during the coming week. (Later: on March 29, the Hospital Service Bill passed the Assembly, with a vote of 64 to 0, and without any additional amendments.)

**Venereal Disease Bills.**—There is much interest in the venereal disease control bills. Assembly Bill 1089, introduced by fifteen Assemblymen, has been substantially amended. Assembly Bill 2790 is sponsored by the State Board of Public Health. Assembly Bill 2569 (the G-S bill) is sponsored by Assemblyman Richie of San Diego. All of these bills will be heard before the Assembly Committee on Public Health and Quarantine on March 24.

**Nursing.**—Assembly Bill 2125, of interest to nurses, has been withdrawn from the calendar of the committee, with the report that interested parties are getting together outside of the Legislature.

**Compensation Act Amendments.**—There are a number of bills amending provisions of the Workmen's Compensation Act, and some of these would give the injured employee free choice of any licensed healer (not confined to M. D.'s). But determined opposition has brought about postponed consideration of these until April 2.

At the Del Monte annual session, on May 3, Dr. Junius B. Harris of Sacramento, Chairman of the California Medical Association's Committee on Public Policy and Legislation, will present a progress report.

#### NEW FEATURES IN COUNTY MEDICAL SOCIETY MEETINGS

**County Society Programs Should Be of Broad Scope.**—The order of business at meetings of many County Medical Societies has varied but little with the passing years; the generally accepted plan being the reading and discussion of one or two didactic papers on medical topics with which, at times, are given some reports of cases and a brief consideration of business items. The tradition of constancy to this type of program has been so firmly instilled that, when attempts are made to introduce the consideration of important, modern-day problems having to do with medical economics, not infrequently the suggestions are received with silent or outspoken opposition.

Such conservatism and allegiance to former procedures, however, are not everywhere prevalent, and less so, perhaps, in the Far West than in the East. As throughout the Union some of the pressing economic and social welfare problems begin to make themselves felt in medical practice, there are indications of an increasing willingness to permit discussion of matters closely related to medicine's progress, even when these encroach only indirectly on scientific medicine. It is fortunate that an alteration of attitude has come about, because, in this changing, present-day world, with the emphasis that is being placed on regimentation, and on mass and stereotyped production, it is apparent that institutions, organizations and individuals who do not recognize these newer forces may find cause, later on, to regret their indifference or opposition. It is becoming increasingly evident that State and County Medical Societies, through perhaps their official publications, must call the attention of members, not once, but repeatedly, to problems directly or indirectly affecting medical practice, and concerning which it is important to have unity of opinion and collective action. Only through frank discussion and subsequent agreement on courses of action to be pursued, may we hope for successful outcomes in some of these matters which so threaten medical practice and the interests of physicians. In this connection, it is gratifying to note that medical schools also are awakening to their responsibilities to young men and women, by them in the past so often launched into professional practice, saturated presumably with medical knowledge and idealism, but with little or no comprehension as to just what they may be apt to meet in a practical world, or along what lines it would be wise for them to guide their courses if mistakes or blunders, that might prove handicaps for years, were to be avoided.

#### Fraternal Contacts and Understandings Should Be Encouraged.

—Somewhat of the lack of acceptance of these nonscientific portions of medical practice has its basis in the inadequate attention which societies have given in the past to fraternal affiliations between members; it being forgotten or minimized that, through such social fellowship, come better, broader and kindlier understandings, ends much needed in a profession where individualism plays so vital a part in daily living and practice. For instance, that is why dinner meetings, preceding or following scientific and business sessions of County Medical Societies, can be made to have great value. It is encouraging to note the increasing number of medical organizations beginning to appreciate this. In the larger societies, especially, additional features may be brought forward to promote good fellowship, as well as the concord of purpose that comes from better personal understanding and friendship with colleagues whom one might otherwise know only by name, or in the most casual manner.

\* \* \*

#### Two Recent Novel Features Sponsored by the Los Angeles County Medical Association.

Reference may be made, in this connection, to two recent activities which have created much interest in the Los Angeles County Medical Association. One was the Hobby Exhibit, described on page 134 of the February issue of CALIFORNIA AND WESTERN MEDICINE, in which more than forty members presented exhibits of their activities in nonmedical art and work, by displaying things they, themselves, had made or collected. It was the opinion of the many visitors to the "hobby show" that it rendered a most useful service, not only to the County Association and its members, but, through publicity given in the daily press, also to the community.

On page 286 of the current issue appears a story of an "Amateur Night" which was marked by the largest attendance yet recorded since the new headquarters of the Association have been used, the audience consisting of almost six hundred physicians, each of whom enjoyed the talent displayed by fellow members, and voted the evening's entertainment a great success. Mention may also be made of the Bridge Tournament, which was carried on during the noon hours throughout the year. An account of this, with a description of the President's Perpetual Bridge Trophy, is given on page 282 of this month's issue.

The officers of the Los Angeles County Medical Association, therefore, are of the opinion that these new forms of Society activity have been of aid in strengthening the Association, and they propose to continue efforts along such lines.

\* \* \*

#### Medical Societies Should Promote Scientific, Organization and Fraternal Activities.

—There is as much need today as ever for support of all plans that make for the advancement of medical science, but it is an error to think that component county units in the United States—upon whom,



through collective action, falls much of the burden of maintaining, in their own territories and at large, the standards of scientific medicine—can be true to progress in medical science only by remaining aloof from relationships essentially human and fraternal.

As a matter of fact, in every County and State Medical Society, scientific, and also organization and fraternal, activities should be given proper places. There is a real demand for each, and a study of societies will reveal that those associations which give each of these elements their due recognition are accomplishing the best work for medicine, the public health, and for themselves.

#### "THROW AWAY" PUBLICATIONS

**Minnesota Medicine Calls Attention to a Growing Evil.**—A letter from the editor of *Minnesota Medicine*, on page 202 of the March, 1937, issue of *CALIFORNIA AND WESTERN MEDICINE*, called attention to the manner in which so-called "throw away" publications—sent out by the thousands for distribution to physicians throughout the Union—were abstracting, without permission, article after article which had previously appeared in State Society and technical journals. The Minnesota Committee on Publications stressed the importance of recognized medical magazines copyrighting their articles, in order to prevent these bold and unwarranted forays upon their contents. Several of these publications (with a no-subscription price, but distributed-free background) that have come into existence during the last several years, state in prominent type that more than 100,000 copies of their current issues had thus been placed in the mails.

The character of the advertising carried in most of these magazines is much like that which appeared, some twenty-five years or more ago, in a group of proprietary medical journals, the majority of which later went out of existence. As a consequence, for about two decades, the advertising pages in medical publications have been of comparatively decent standard, because of the nonexistence of periodicals which would accept advertising copy from the promoters of remedies whose formulae were not known or accepted by responsible investigators, such as the Council on Pharmacy of the American Medical Association.

\* \* \*

**Character of Advertising in These Newer Publications.**—Come now, and rather of a sudden, not one, but almost a dozen of this new type of journal, in which all kinds of advertising seem acceptable, and as a consequence of which the announcements of all kinds of nonapproved remedies are freely interspersed with the abstracts of articles, written by physicians of established reputation, whose original papers appeared in well-recognized medical journals. It is possible that the increasing number of such magazines may

ultimately make for their disappearance, on the natural supposition that firms which would present for consideration only drugs and remedies proven and acceptable to scientific and ethical medicine would no longer wish to be associated, page to page, with promoters of remedies not endorsed by the American Medical Association's Council on Pharmacy.

\* \* \*

**"California and Western Medicine" Is Protected by Copyright.**—The California Medical Association, through its Council in the year 1934, took out a copyright, and on a number of occasions the attention of several of these more recent periodicals has been called to their violation of that legal protection. Members, therefore, will confer a favor upon the central office of the California Medical Association if they will notify the Association Secretary whenever and wherever they detect such abstracting by irresponsible journals of articles previously and originally published by *CALIFORNIA AND WESTERN MEDICINE*. The California Medical Association gladly extends to state medical publications and others recognized in the specialties and of acceptable standard, the right to quote from and to make extracts of the contents of the *OFFICIAL JOURNAL*. Through its copyright protection, however, it again gives notice to all other periodicals, particularly to those of the "throw away" type, that the right to print any part of its contents, in abstracts and excerpts, is strictly forbidden.

#### EXCESSIVE FEES: THE HARM THEY DO TO SCIENTIFIC MEDICINE

**What Newspaper Publicity Has Done.**—Publicity in newspapers concerning suits over excessive fees has been a big factor in creating, among many estimable citizens, a prejudice against the medical profession; and one of the regrettable effects of such discussion by laymen can be noted in the support which is so militantly given by some civic organizations to various proposed legislation. Among such propositions are those which would open to nonindigent persons, on a part-pay basis, the doors of public institutions maintained for the indigent sick; the sponsoring of compulsory health insurance laws; and the support of voluntary health insurance measures, these last sometimes so loosely drawn that the medical protective feature (presumably of ample amount and types, as well as mandatory) is more a matter of assurance on paper than real security, and little less than a trespass upon the credulity of the unfortunate holders of policies.

In the late nineties and years immediately following, before the Carnegie-Flexner survey of medical colleges of the United States and prior to the surprising legal recognition of cultist groups by some of the States (of which California was one), comparatively little was seen in the daily press on the subject of excessive fees for medical and surgical services.

**The Graduates of Smaller Colleges of Former Days.**—Looking backward, however, it is to be noted that those were days when the graduate of a smaller or proprietary medical school was apt to be looked upon somewhat askance, or as one of a group of practitioners whose authority of licensure went far to lower the tone of medical standards; and this opinion held with many, in spite of the fact that many eminent in medicine had been, and were, graduates of just such small institutions—their mental capacity and love of the art ultimately giving this group a place, side by side, with leaders in the profession whose undergraduate years had been spent in more favored university schools. It is true that during the last twenty-five years the standards of medical education have been greatly advanced, so that the graduates of today go forth with far more science at their command than their predecessors of two or more decades ago. Yet, in the practice of medicine, mere knowledge of facts is not the end, an equally important element being the capacity to think clearly and to apply the knowledge possessed in logical, scientific manner, and with true art.

\* \* \*

**More Than Professional Training Alone Is Needed to Produce the True Physician.**—It must be remembered that every medical student and physician is himself, before he is a doctor of medicine, and that no matter what knowledge he may acquire, his basic character will temper his professional work and tone. When then, occasionally, a licensed practitioner, who has had excellent professional training, places commercialism before service (as is manifested, for instance, in fees so high that they are out of all proportion to those asked by colleagues of equal ability, and for services of a similar nature), a real hurt is done to the medical profession of the community in which the offending individual practices; and for an older practitioner to commit such an act only makes the offense the greater. In view of the damage done to medicine by individuals having these supercommercialistic tendencies, it may be asked whether it would not have been better had they never taken up the practice of medicine, but used all their talents in the business world, where search for profits is not associated with a profession inspired by altruistic obligations; and, also, whether such physicians have not done more to lower the esteem in which the medical profession was held in former years than did, in earlier days, the graduates of small proprietary medical schools (whose places in both rural and urban centers have been taken by cultist practitioners).

\* \* \*

**A Case in Point.**—These reflections are engendered by a recent newspaper item concerning a licensed physician in California who sent a well-known actor a statement for medical services, and demanded in excess of ten thousand dollars; and when the patient refused to pay, the physician entered suit, with the result that the newspapers promptly played up the item for the edification of

their readers. Immediately, and on all sides, were heard words of condemnation for the physician who had rendered the bill. And what made the case, from the standpoint of organized and scientific medicine, the more deplorable, was the fact that the medical man who rendered the twelve-thousand-dollar statement was cited several years ago to appear before the State Board of Medical Examiners (subsequent to a court trial on a narcotic charge that then received much publicity in the newspapers), when the Board, after its hearing, revoked his license. As might be expected, the physician thereupon appealed to the Superior Court, only to have the Court sustain the Board of Examiners, although later the Board, in 1934, restored the practitioner's license while placing him on probation with certain stipulations; which restrictions, at the time this is written, stand. And now comes this later exploitation of a fee of some twelve thousand dollars, which this same physician construed as a proper return for the care of a patient through an illness of not over-great duration. Here, surely, is an instance where it is impossible to estimate the damage done by the wrong kind of publicity!

**Other State Association and Component County Society News.**—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 267.

## EDITORIAL COMMENT†

### THE TREATMENT OF HEMORRHAGIC DISORDERS\*

The diagnosis of hemorrhagic disorders involves a careful study of the capillaries, the plasma, and the platelets. Abnormal bleeding is due to disturbances in capillary permeability with or without alterations in the plasma or platelets. Rational treatment depends upon the proper assessment of the part played by each factor in abnormal bleeding.

Clinically, hemorrhagic disorders may be divided into two main classes, hemophilia and purpura.

In hemophilia the primary fault is in the plasma. The platelets fail to lyse readily. Extravasation of blood occurs when the capillary permeability is increased. This usually follows upon trauma.

Purpura is divided into hemorrhagic purpura, characterized by the escape of whole blood from blood vessels and mucous membranes, and anaphylactoid purpura, characterized by diffuse bleed-

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

\* From the Division of Medicine, University of California Medical School, San Francisco.

TABLE 1.—Findings in Certain Hemorrhagic Diseases

	Capillary Resistance	Bleeding Time	Coagulation Time	Clot Retractility	Platelets Numbers	Platelets Lysis
Thrombopenic purpura .....	Diminished	Prolonged	Normal	Poor	Diminished	Normal
Non-thrombopenic purpura..	Diminished	Prolonged	Normal	Poor	Normal	Normal
Thrombasthenic purpura .....	Diminished	Prolonged	Normal	Poor	Normal	Increased
Pseudohemophilia .....	Normal	Intermittently prolonged	Normal	Occasionally poor	Normal	Normal
Hemophilia .....	Normal	Normal	Prolonged	Normal	Normal	Diminished

ing from mucous surfaces, ecchymoses, and swellings containing plasma. Purpura of any type may or may not be associated with a diminution of platelets.

*Findings in Certain Hemorrhagic Diseases.*—These are outlined in Table 1.

*The Capillaries.*—Capillary permeability is increased in certain allergic conditions: vitamin B and C deficiency; infections, especially those due to streptococci; chemical poisoning due to drugs having a vasculotoxic effect, *i. e.*, arsenic, benzol, gold, benzamins; after large doses of venom; and in hereditary defects of the vascular endothelium.

Capillary permeability may be altered by immunization with moccasin snake venom; administration of calcium and parathormone; induced hypersensitivity to hen or sheep sera; intravenous administration of cevitimic acid; and by intramuscular administration of antivenin.

*The Plasma:* Bleeding is favored when the plasma is deficient in prothrombin, fibrinogen, or calcium. When blood is shed, the thrombokinas liberated by disintegrating platelets assists in the formation of the thrombin clot. Only a few platelets are necessary for the coagulation of blood, but many are needed in order to have proper clot retraction.

Prothrombin and fibrinogen may be altered by diets high in protein and fat. Transfusions, intramuscular whole blood, styptysate, and the parenteral inoculation of various blood sera alter the plasma in such a way as to inhibit bleeding. Exposure to x-ray acts similarly.

For local bleeding, the usual hemostatics, adrenalin on cotton, fresh blood on cotton, the application of fresh muscle tissue, styptysate, fibrinogen, thromboplastin, and cobra venom, are at times effective.

*The Platelets:* The problem of the genesis and function of the platelets is not yet settled. In normal blood their numbers vary from 150 to 900 thousand per cubic millimeters, depending upon the method used in counting them. It has been stated that they represent the remains of intravascular debris derived from the breakdown of blood cells and vascular endothelium. They are a source of thrombokinas, and act as a cement substance to barrier the flow of blood through pathologically permeable capillaries.

The platelets may be increased after transfusion, intramuscular inoculation of whole blood, autohemotherapy, inoculation of foreign protein,

ultra-violet irradiation, exposure to x-ray, and splenectomy.

In emergencies, transfusions or the intramuscular inoculation of whole blood offer the best means for controlling hemorrhage.

University of California Medical School.

S. P. LUCIA,  
San Francisco.

Individuals, sometimes getting out of patience with our complex modern life, would return to a simple order of things. Rousseau advocated going back to nature, urging people to lay aside artificiality and compose themselves in a kind of primitive state. His plan was admired, widely discussed, but not put into practice; for society, like time, never moves backward. We can no more return to an earlier condition than the old can become young. Reform, as well as development, goes forward. The car of civilization ascends or descends, but has no reverse gear.

*Treatment of Obesity in Children.*—Mallam is convinced that dieting is the keystone to treatment in almost all cases of obesity in children, but before prescribing a system of diet a careful family history and knowledge of conditions under which the child is being reared must be obtained. Obesity beginning in childhood often gives rise to endocrine trouble later on, and when one finds a strong dominant obesity factor in the family, one should always be prepared to face a more difficult task than in a purely fortuitous case arising from normal stock. Even then, however, a cure, permanent and complete, can be obtained in the majority of cases by simple measures. The treatment must be explained carefully to the child and need not be elaborate. A simple practice is to weigh and measure the child and give it a diet based on the calculated basal requirements for this particular height and size. This is merely a beginning figure, and it may be necessary either to add to or subtract from the initial starting point. The question of the fluid intake is of considerable importance. If these children are counseled to drink early in the morning and then to try not to drink at all through the day, this is often a great help in reducing weight. Appetite is largely a question of satiation, and these children must be schooled to eat slowly. Salt and sugar should be cut down to a minimum. Many children appear even fatter than they are because of postural defects. Exercises devoted to training the recti abdominis and correcting any possible lordosis and to making them stretch their overloaded limbs are all valuable. Such exercises are always more effective under trained supervision and are usually better done in a class of several children. Some sort of abdominal support employed temporarily often gives considerable help. At the same time strengthening exercises are absolutely essential, for without them one must either rely on artificial means or face a serious chance of visceroptosis. If a child loses weight consistently under treatment, the treatment is being overdone. If one treats an overweight child of ten years and at twelve the child weighs the same, one should realize that a great deal has been achieved.—*Clinical Journal* (London).



## ORIGINAL ARTICLES

### LYMPHOMATOID DISEASE: HODGKINS AND LEUKEMIC TYPES—THEIR TREATMENT\*

By H. J. ULLMANN, M.D.  
Santa Barbara

DISCUSSION by Irving S. Ingber, M.D., San Francisco; William E. Costolow, M.D., Los Angeles; Raymond G. Taylor, M.D., Los Angeles; John C. Ruddock, M.D., Los Angeles.

A GREAT deal has been written on the treatment of the leukemias and lymphoblastomas by radiation. It is only in the last few years, however, that radiologists, to whom these sufferers must look for relief, have begun to consider the patient as an individual instead of a case for such or such dose or course of radiation. This paper is written as a plea to consider each case as a separate problem, and that no radiologist who is not also a clinician is qualified to treat them. This is essential, because if the best results are desired from radiation therapy, the radiation therapist must be in charge of the patient. The plea of the internist, that the radiologist is not qualified to decide anything but the size of the dose of radiation, if true, disqualifies that radiologist from treating the patient, and the referring physician is responsible for sending his patient to an incompetent therapist for treatment of a disease requiring the highest type of clinical judgment if life is to be prolonged.

#### PRINCIPLES OF TREATMENT

The scope of this paper and the time allotted for its presentation are too short for even an attempt to cover the subject. Nothing will be said regarding details of radiation technique such as regions to be treated in the various types of cases, for they are well known to competent radiologists. It is desired to present what the author believes are the proper principles of treatment, and what may be summarized as follows: The patient must be considered as an individual with a disease, and one differing in major or minor degree from every other individual with the same disease. The radiation, because these diseases are not curable, must be the smallest in amount that will produce beneficial results. Single doses, as small as 50 r, measured on the skin will often produce the effect desired when larger ones would shorten life. Size of dose and intervals between radiations must be determined by the patient's condition and response to previous treatments. As many of these patients live for years under proper management, copper filtered radiation or its equivalent should be used where possible to prevent eventual skin injury. Repetition of treatment should be determined by laboratory findings rather than clinical symptoms. An increase in the mediastinal shadow calls for treatment long before there are clinical symp-

toms. A change in the blood count, quantitative or qualitative, should be a warning even if the patient feels well or no enlargement of spleen or lymph nodes can be felt. While radiation is the primary method of treatment, others must not be forgotten. Diet must be regulated, occasional drugs prescribed and, of prime importance, the morale of the patient maintained.

#### REPORT OF CASES

Two cases will be discussed to illustrate the application of these principles—a Hodgkin's disease and a lymphoid leukemia.

CASE 1.—The patient with Hodgkin's disease was a boy of twelve years when first seen at the Mayo Clinic. For a year previously he had been treated for tuberculous adenitis, without improvement. He was referred to Doctor Desjardins for radiation therapy in February, 1925, with the diagnosis of Hodgkin's disease. The regions treated were the right and left cervical, infraclavicular, axillary and inguinal. Also the mediastinum and prevertebral lymph tracts, all at 135 K V P through 4 millimeters of aluminum. A second course was given in March, and in April a third to the cervical and axillary regions only. In July only a few very small nodes could be found in the supraclavicular spaces, and these received a fourth treatment. His family moved to Santa Barbara and he came under my care in August, 1925. No radiation was needed until March, 1928, when nodes were palpated in the cervical, axillary and inguinal regions. These were treated at 130 K V P through 0.25 millimeters of copper plus one of aluminum between March 28 and April 9, 1928, inclusive. A check of the mediastinum showed a broadening of the shadow, and this was treated at 200 K V P through Cu 0.5 plus Al 2.0 millimeters. In December, 1929, the inguinal and axillary regions were irradiated, and again in June and December, 1931, and May and December, 1932. These last consisted of single irradiations of small nodes. In March, April, and May, 1933, occasional irradiations to the mediastinum were given, and again in June and July, 1934. The mediastinal nodes became more resistant (or perhaps more apt to enlarge) and required treatment again in February, April, and May, 1935. Continuous though intermittent mediastinal radiation has been required to the present time to control a tendency of the mediastinal shadow, not only to broaden, but to infiltrate, and lately it has been impossible to obtain a complete clearing.

In spite of this, the young man feels entirely well and has been so throughout the time he has been under observation. At no time were nodes allowed to develop to the point of producing symptoms or even of attracting the patient's attention. He attended school regularly, and was graduated from Stanford and is now working. He reports regularly for examination, and accepts treatment whenever he is told that it is needed.

CASE 2.—The second case is that of a man with lymphoid leukemia. He was sixty-three years old when first seen in June, 1931. He had had enlarged cervical glands since 1922. He said that they had enlarged and regressed several times, and that he did not feel so well during the enlargements as during the regressions. A diagnosis of mononucleosis had been made at the Rockefeller Institute in December, 1930. The spleen was not palpable. There was a generalized absorption of the alveolar processes, with multiple alveolar abscesses and slight but constant bleeding from the gums. Hemoglobin was 78 per cent; red, 4,050,000; white, 34,100; small lymphocytes, 92 per cent; large lymphocytes, 4 per cent; polymorphonuclears, 3 per cent; eosinophils, 1 per cent.

The chart shows the progress of this case under treatment. Toward the later stages more attention was paid to the total polymorphonuclear count than to the total white count in deciding on both the time of the irradiations and their amount. Because of the oral sepsis and his procrastination in having the teeth removed, it was

\* From the department of cancer research, Santa Barbara Cottage Hospital.

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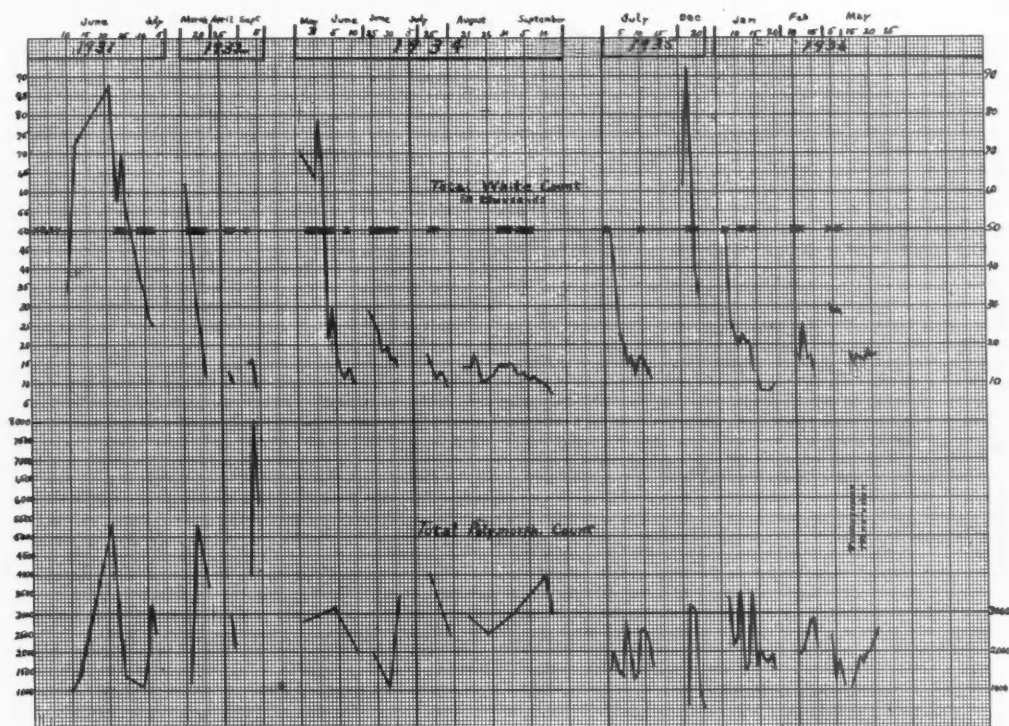


Fig. 1.—Lymphoid Leukemia.  
X=radiation

felt that a reasonable polymorphonuclear count was of more importance than the height of the total count. He was repeatedly urged to have his mouth cleaned up and always promised to do so in the future, but never did. It was felt that the oral sepsis was the immediate danger point. This month (May, 1935) he had an upper incisor extracted with immediate extension of the sepsis into the roof of the mouth. There was considerable necrosis. The total white count was moderate, but the polymorphonuclear count alarmingly low. The beneficial effect of blood transfusions on the polymorphonuclear count may be seen on the chart. As the polymorphonuclears increased, the oral necrosis became demarcated and finally began to heal. With the remaining teeth set in extensive abscesses and the count as shown, I leave it to your imagination what the outcome will be. This chart is shown to illustrate how the blood picture can be controlled by small repeated irradiations over a long period, and how it is also necessary to use other methods as indicated; in this case oral hygiene (a failure from lack of cooperation) and blood transfusions.

#### IN CONCLUSION

I believe that if these principles, requiring both clinical judgment and knowledge of the effect of radiation, are followed, the average life of patients with these diseases may be considerably lengthened.

1520 Chapala Street.

#### DISCUSSION

IRVING S. INGBER, M. D. (490 Post Street, San Francisco).—Lymphomatoid disease being chronic, progressive and incurable, one must, in treating these conditions, utilize all of his talents in the prolongation of life with the greatest degree of comfort to the patient.

To attain this objective, we should bear in mind that lesions may occur wherever lymphoid tissue exists; and having this in mind, one will not be confused when con-

fronted with rather unusual complications which happen not infrequently.

Doctor Ullmann has rightfully stressed the importance of utilizing the smallest possible dose of x-rays consistent with beneficial results. The reasons will appear quite obvious to the experienced radiologist.

The lesson to be learned from Doctor Ullmann's second case is the importance of a complete survey of the patient in the beginning, especially in reference to locating all possible sources of focal infection, and eradication of the foci as quickly as is consistent with the patient's condition; and, finally, periodic examinations of the blood in order to maintain a clear conception of the progress of the case.

✱

WILLIAM E. COSTLOW, M. D. (1407 South Hope Street, Los Angeles).—Doctor Ullmann has brought up some very valuable points in connection with the treatment of leukemias and lymphoblastomas by radiation. The idea that the radiation therapist should be qualified to control the clinical aspects of the case is a good one, as the treatment of these conditions is almost entirely radiologic. The day is rapidly passing for the diagnostic roentgenologist to give treatment under the direction of the internist, who is unfamiliar with the action and effects of radiation. The radiation therapist is a new type of medical specialist who is rapidly establishing himself in the field of cancer and diseases treated by radiation because he must know the clinical phases of these diseases, as well as be familiar with the action and effects of radiation agents.

In the lymphomatoid diseases the aim of therapy is almost entirely a palliative one. In order to produce the longest possible palliation, it is important that not only the general condition of the patient be maintained, but also that skin reaction be avoided so that the radiation treatment can be repeated at intervals for a long period of time. The small doses of copper-filtered radiation advised by the author are very essential.

In general, in the leukemias, the chief indication for additional radiation therapy is the increase in the percentage of the immature forms of blood cells. These findings must be correlated with the total white count and

another most important factor—the general clinical condition of the patient. Although in the early stages of the disease prompt remissions are obtained, the life of some of these patients may actually be shortened by overzealous radiation treatment improperly prescribed.

The lymphoblastomas so simulate highly malignant diseases in their clinical course and response to treatment that one familiar with the palliative radiation treatment of cancer may greatly alleviate the suffering of these patients, and actually prolong their lives many years.

✱

RAYMOND G. TAYLOR, M.D. (1212 Shatto Street, Los Angeles).—Doctor Ullmann's plea for individualization in treatment of these conditions is certainly well taken. However, I feel that one should not get the impression, possible from his paper, that individualization means necessarily small doses. In our own experience, we have had a number of patients who did fairly well, over a long period of time, with fairly large doses—not very often repeated.

Doctor Ullmann reports he had remarkable cooperation in Case 1; and it would seem as though this were an ideal case for the small-dose method that he advocates, and he is to be congratulated on the result. However, the best of cooperation is not often obtained, as he notes in his Case 2.

We have had one patient, as I recall, who absolutely would not return for treatment until she got into a very distressing condition. This was a Hodgkin's, and the lesions were chiefly in the neck and mediastinum. Fairly large doses were necessary to accomplish anything with her at any time. However, we were able to keep her alive and useful (she even went through a pregnancy successfully) for over nine years, but finally died after going East.

I should be interested if Doctor Ullmann would tell us if his patient in Case 1, which had so many treatments and over such a long period of time, has had skin reactions or changes that are still evident.

So far as our experience is concerned, the time comes with all these patients when the lesions become radio-resistant, and then I think larger doses can be used with some benefit. However, the progress of the disease, after evidence of increased radio-resistance in the lesions, is almost invariably down hill and usually rapid.

✱

JOHN C. RUDDOCK, M.D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Ullmann's paper on the treatment of lymphomatoid disease is a timely one, and it is refreshing to note that he stresses the point that radiologists are considering the patient as an individual rather than a case for such a dose or course of radiation. Lymphomatoid disease is incurable at this time, although it is agreed that it is possible to prolong life by means of radiation. These cases, however, fall within selected groups. We must not lose sight of the fact that although the pathologist has given us a biopsy report of lymphoma, the end-result may be Hodgkin's disease, leukemia, or lymphosarcoma. The prognosis in each of these three types is somewhat different. Leukemia may be either acute or chronic, prognosis in Hodgkin's disease would depend upon the structural involvement, while the prognosis of lymphosarcoma is a very grave problem. Doctor Ullmann reports presence of profound mouth infection in one of the cases. This is merely one instance of things that may happen in cases of this character.

Patients are naturally desirous of living as long as possible, and so demand comfort. In the treatment of cases of this character much can be done toward increasing the longevity and the comfort of life of the unfortunate patient affected by a complete understanding between the radiologist and the patient's physician. Judgment is paramount, and cooperation and coordination of treatment among all those concerned are necessary if the welfare of the patient is to be considered.

✱

DOCTOR ULLMANN (Closing).—I agree with Doctor Taylor that individualization does not necessarily mean small doses. There are instances where the dose should be increased, but as a rule these are the exceptions. I can only emphasize my statement that clinical judgment in treating these patients is essential.

There are never any skin reactions when the small-dose method is used with heavy filtration. In fact, reactions would preclude such continuous treatment. In the patient with Hodgkin's disease the skin over the mediastinum is now showing some dryness and tan, but this has always disappeared whenever there is a long interval between treatments. Of course, he was warned not to take sun baths and to keep the chest covered when on the beach.

I am in accord with Doctor Ruddock that the best interests of the patient are served when there is complete cooperation between the internist and the radiologist. Unfortunately, in practice this does not always occur, as each physician assumes the other is watching the patient and the internist too frequently exercises his own judgment, regarding further treatments, without consulting the radiologist. This often results in postponement of treatment beyond the point where the greatest benefit would accrue.

### TOXEMIAS OF LATE PREGNANCY\*

By JAMES V. CAMPBELL, M.D.  
Oakland

DISCUSSION by H. A. Stephenson, M.D., San Francisco; L. Grant Baldwin, M.D., Pasadena; John W. Sherrick, M.D., Oakland.

IN reading the literature on the toxemias of pregnancy, one is always rather alarmed by the high incidence of mortality, both maternal and fetal. Maternal deaths in eclampsics vary in different reports, but in this country they average about 20 per cent and fetal mortality ranges from 3.62 to 42 per cent.<sup>1,2,3</sup> While much has been done to better the general welfare of pregnant women, "no substantial decrease has been made in the death rate due to toxemias and chronic nephritis."<sup>4</sup>

The next factor which stands out is the great variety of etiologic factors that have been suggested and the strictly empiric or symptomatic treatment resorted to.

A third observation which seems significant is the apparently definite relationship of the early toxemias to the late toxemias. This will be discussed later in the paper.

The present report represents 168 women, who developed signs and symptoms of toxemia, in a series of 4,979 consecutive deliveries in the private practice of several physicians—an incidence of 3.35 per cent. Other reports give a higher percentage of toxic patients, but their definition of beginning toxemia varies somewhat from this one especially as to what constitutes elevated blood pressure.

#### PATIENTS INCLUDED IN THIS STUDY

Any patient who developed a blood pressure of 150 systolic or over, or showed other definite signs or symptoms of toxemia such as albuminuria, edema, persistent headaches, etc., was included in the study. If she had edema of the lower extremities only, with no other evidences of toxemia, she was not included because it is felt that edema of this nature is due to pressure with a resultant poor return circulation. No cases of acute yellow atrophy were encountered. Five patients who had primary arterial hypertension or "essential hyper-

\* Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.



tension" were included. These individuals had their hypertension when first seen, but no other indications of toxemia developed while under observation.

The term "eclampsia," as used in this paper, indicates the presence of true convulsions or coma. Preëclampsia means the nonconvulsive toxic patient.

#### AGE INCIDENCE

The age incidence varied from 18 to 45 years, with an average age of 30.2 years. In most articles on toxemia it is noted that there is a marked preponderance of primiparae, and this report is no exception. Primiparae accounted for 114, or 68 per cent, of the toxic patients. Of the fifty-four multiparae, twenty-seven (50 per cent) had had toxemia during their first gestation, and five of these patients were toxic for a third consecutive pregnancy. Other writers<sup>3</sup> also report that 50 per cent of toxic patients develop toxemia in subsequent pregnancies.

Adequate prenatal care in the majority of cases is indicated by the fact that these patients were under observation on an average of five months, and their average weight gain was only twenty-two pounds, which is within normal limits.

#### TREATMENT PROCEDURE

A fairly uniform type of conservative treatment was tried as soon as the first signs of impending toxemia appeared. Depending upon the severity of the disease, the following routine was followed: (1) rest (restricted activity, bed rest, or hospitalization); (2) diet (salt-free, low protein, forced fluids, fruit juices, milk); (3) elimination (citrate of magnesia, colonic irrigations, or magnesium sulphate either by mouth or intravenously); (4) alkalization; (5) quite frequent use of nephritin; (6) sedatives. Venesection was never done. It is interesting to note the relative frequency of the first warning signals of toxemia: albuminuria, 94; elevated blood pressure, 69; edema, 9; convulsion 1; epigastric pain, 1.

#### SOME SIGNS AND SYMPTOMS

Further observations on the frequency of signs and symptoms that developed during the disease and were sufficiently severe to be noted showed the following ratio: albuminuria (with or without casts), 158; elevated blood pressure (150 or over), 136; edema, 91; headache, 58; nausea (with or without vomiting), 29; eye symptoms, 16; epigastric pain, 11.

This group of patients were observed on an average of 30.5 days from the time of the initial appearance of toxicosis until delivery. While conservative treatment was always tried, when possible, immediate delivery was done whenever the patient did not respond to her treatment. It was felt that conservatism ceased to be advisable if the patient was allowed to develop true eclampsia, or was becoming markedly worse. Dieckman<sup>5</sup> expressed the opinion, generally held in this series of cases, when he stated that if there was no improvement in the toxemia, or that the condition

became worse after seven to ten days of treatment, the pregnancy should be terminated.

#### TYPE OF DELIVERY

The method of delivery was also based upon the theory that to follow conservative methods to their logical end would result in the loss of more mothers and more babies. The following table bears out this contention:

Type of Delivery	Maternal Death	Fetal Death
Normal ..... 57	2	8
Forceps ..... 41		
Low, 16		2
Mid, 20		2
High, 5		2
Breech ..... 10		2
Version and extraction ..... 5		2
Cesarean (35.12 per cent) ..... 59	0	
Classical ..... 52		2
Tubal ligation, 1		1
Hysterectomy, 4		1
Vaginal ..... 3		3
Total deliveries ..... 168	2	23
Twins ..... 6	1.2%	13.2% corrected 6.32%
Total number of babies, 174		

In 168 deliveries of 174 babies, there were fifty-seven normal deliveries with two maternal deaths (the only maternal mortality in the entire series), and eight fetal deaths. Forceps were applied forty-one times, with four dead babies being born. Two fetal deaths followed the ten breech extractions, one craniotomy, and one of a set of twins. Following five version and extractions, there were two fetal mortalities.

#### MORTALITY

The first maternal death was that of a forty-year-old patient, who had had seven previous normal pregnancies with normal deliveries. Five days before labor she developed a mild preëclamptic toxemia. Two days following normal labor she was found to have a right pyelonephritis superimposed on a chronic nephritis, verified at autopsy. Death occurred eleven days postpartum. The baby was living and normal.

The second patient to die was thirty-six years of age, and in her second pregnancy. She had had a moderate preëclamptic toxemia for the last two weeks of her first pregnancy. She developed her first evidence of toxemia thirty hours before this confinement. Following hospitalization, labor was induced and she was delivered normally of a healthy, full-term child, though she had one convulsion during labor. A moderate postpartum hemorrhage was noted. Her condition became worse and death occurred only a few minutes after delivery.

Of the entire series there was a maternal mortality rate of 1.2 per cent, while the fetal mortality rate was 13.2 per cent with twenty-three deaths. By eliminating the prematures (before seven months), macerated fetuses, and the two babies,

already dead, on whom craniotomy was done, a corrected rate of 6.32 per cent is obtained.

#### CESAREAN SECTION

Cesarean section was done in fifty-nine cases—an incidence of 35.12 per cent—with no maternal and seven fetal deaths, all but one being premature. The classical operation accounted for fifty-two of these; four others were followed by hysterectomy, the so-called Porro section; three were delivered by vaginal hysterotomy.

Induction of labor was attempted with sixty-five patients, using one or more of these methods: castor oil and quinin, bagging, rupture of membranes, and some form of pituitrin. Four of these were not successful and eventually the patients were sectioned.

Because of the large percentage of cesarean sections, as compared with other reports, these are more completely analyzed:

Cesarean			Fetal Deaths
Indication: Toxemia (33)			
Fulminating .....		20	
Only reason .....	12		1
Disproportion .....	4		
Relative .....	3		
Flat pelvis .....	1		
Soft parts .....	4		1
Progressive toxemia .....		9	
Failure of induction .....	4		
Vaginal hysterectomy .....	2		2
Only cause given .....		4	
Indication: Obstetrical (26)			
Disproportion .....		11	
Funnel pelvis .....	5		
Relative .....	3		
Flat pelvis .....	2		
Justo minor .....	1		
Previous cesarean .....		4	
To sterilize .....		4	
Hysterectomy .....	3		
Tubal ligation .....	1		1
Abruptio placenta .....		3	
Classical .....	1		1
Hysterectomy .....	1		1
Vaginal .....	1		
Heart disease .....		2	
Elderly primipara .....		2	
Total .....	59		7
Corrected .....			11.47%
			1.7%

The patients who had the cesarean operation can be grouped into two classes: (1) the cases in whom toxemia was the primary factor; (2) those who were operated for some other cause, but happened to have a relatively mild toxemia.

Of twenty-three cases of fulminating toxemia, twenty were sectioned. These were subdivided into twelve cases, who were operated because of the toxemia alone—one fetal death (prematurity); four with disproportion; four with long, uneffaced cervixes—one fetal death (prematurity). In the last eight cases it was felt that a prolonged labor would mean almost certain death of the baby, and would greatly add to the danger to the mother.

Four individuals were operated in whom no other cause than toxemia was stated in the records.

Nine patients showed definite signs of a progressing toxemia, which did not yield to conserva-

tive treatment. In four incidences induction of labor failed. Two of the nine had vaginal hysterectomies, with loss of both babies: one premature, and one craniotomy on a dead baby.

Thus, thirty-three cases were operated upon because of a severe toxemia, although about 58 per cent of this group had added indications.

#### OTHER THERAPEUTIC INDICATIONS

The indications for the remaining twenty-six individuals were primarily obstetrical. Disproportion accounted for eleven, with no deaths. Four patients had had previous section. Sterilization was either requested or urged four times: three of these were done by cesarean with hysterectomy, and one had tubal ligation following classical section at eight months, when the baby died two days postpartum. It is interesting to note that the indication for sterilization was the same in each case—toxemia in all preceding pregnancies. Hemorrhage, due to premature separation of the placenta, occurred three times: one classical section; one vaginal cesarean (loss of baby—prematurity); and one classical section followed by amputation of the fundus. In the last case the patient was forty-one, had had one previous baby, but lost this one due to prematurity. Two patients had heart disease sufficiently severe to be advised against vaginal delivery, and two were elderly primiparae.

No maternal deaths occurred among the fifty-nine patients who were delivered by cesarean section. Of sixty-one babies born, there were seven fetal deaths (11.47 per cent) with a corrected mortality rate of 1.7 per cent.

#### ECLAMPTIC GROUP

Of course, it is in the eclamptic group that the greatest danger lies. There were twenty patients who developed convulsions of varying severity—an incidence of 12 per cent of the 168 toxemias reported. Two of these were comatose when first seen. Classical cesarean section was resorted to in thirteen incidences; normal delivery in three; forceps in three; and vaginal section in one. One maternal death following normal delivery resulted in this group, a mortality rate of 5 per cent. The number of fetal deaths were four (20 per cent) with a corrected fatal mortality rate of 5 per cent.

TABLE 3.—Summary on Eclamptic Patients

	Babies Living	Born Dead
Total number of toxic patients 168		
Pre-eclampsies .....		
Eclampsies (12 per cent) .. 20		
Convulsions:		
Antepartum .....	6	3
Postpartum .....	5	0
Both .....	5	1
	16	4
Deliveries:		
Cesarean .....	13	
Normal .....	3	
Forceps .....	3	
Low .....	1	
Mid .....	2	
Vaginal cesarean .....	1	
Maternal deaths .....	1—5%	
Fetal deaths .....	4—20%	
Fetal deaths corrected .....	5%	

## EVALUATION OF TREATMENT PROCEDURES

To try to evaluate any given form of treatment or any particular policy that may be followed in the care of the toxemias of pregnancy, is very difficult. We are dealing with a disease entity, the cause of which is obscure and the treatment symptomatic. A policy, such as was followed in this series of cases, would probably give rather disastrous results to the untrained person. Considerable judgment is necessary if one expects to have a relatively high incidence of operative deliveries with this type of patient and still keep the deaths at a minimum.

Conservative treatment and delivery certainly should be the care of choice for the general practitioner. For the specialist, who is adequately trained, a more radical point of view may be taken, to the advantage of both mother and child.

We know that about 50 per cent of women who have a toxicosis in one pregnancy will develop the same condition in subsequent pregnancies, with a resultant permanent damage to the cardio-vascular systems.<sup>8,9</sup> The longer a woman is subjected to the effects of the toxins the more extensive will be the permanent damage and, consequently, the shorter her life expectancy. Herrick and Tillman<sup>6</sup> conclusively show this to be true. Hence, the necessity for immediate termination of the fulminating cases and those patients who become worse under conservative treatment.

## COMMENT

The following discussion is not based on an extensive scientific study, but represents an opinion founded on clinical observations and deductions made from our present knowledge of the toxemias. No attempt will be made to elaborate upon the many theories suggested to date.

It is generally conceded now that there is a definite association between the nausea and vomiting of early pregnancy and the toxemias of late pregnancy. A number of authorities agree that this disease entity is due to some toxin or toxins of unknown origin,<sup>8,9,2</sup> which have a predilection for different organs in different individuals leading to classifications of toxemias on a basis of symptoms and pathology.<sup>9</sup> McIlroy<sup>4</sup> states that "different symptoms may preponderate at various stages of pregnancy, but the ultimate cause is the same in most cases." This association is shown in the series just reviewed. About 50 per cent of all pregnant women have varying degrees of nausea in the first trimester,<sup>3</sup> but we find that 71 per cent of the above group record this complaint. Further analysis of the data shows that nausea occurred early in pregnancy in 76 per cent of the severe toxemias, and this ratio is raised to 81 per cent of the patients who later developed convulsions. Seemingly, the more severe the subsequent toxemia the more frequent will have been early nausea.

We are taught that adequate prenatal care will cut down the frequency and severity of toxemia. No doubt this is true, but how can one account for an incidence of eclampsia of one to two hundred and fifty deliveries in this group, which cer-

tainly have had better prenatal care than in the country as a whole where the incidence is one to six hundred deliveries?

## RÔLE OF TOXINS AND ALLERGENS

It is felt by the essayist that the etiology of the toxicoses of pregnancy in many cases may be based upon the increased sensitization of the patient to the presence or formation of toxins or allergens foreign to the host. These in some way may react to or with a certain hormone or hormones (possibly gonadotropic) to form the symptom-complex known as the toxemias of pregnancy.

As examples, the following may be cited. Any infectious process, such as teeth, tonsils, appendix, endometritis, etc., can form a toxin which is developed within the patient. Furthermore, we know that if this focus of infection can be removed, a certain number of toxic pregnant women will become symptom-free of their toxemia.

Allergens also may be the exciting cause. A thirty-year-old primipara, who complained of frequent headaches and skin eruptions before pregnancy, developed a severe nausea and vomiting with upper abdominal pain. Hospitalization on two occasions only gave temporary relief. An acute pyelitis appeared, was helped by kidney lavage, but underwent spontaneous cure when sufficient acidosis occurred. After removal of milk and eggs from her diet, her nausea and vomiting immediately cleared up, with no recurrence unless she "cheated" on her diet.

The relationship of the toxic element with the hormonal is based upon three proved observations. First, is the pregnancy test of Aschheim and Zondek, in which large amounts of anterior pituitary substance are produced shortly after conception. In the hydatidiform mole, a greater quantity of the hormonal substance is given off. Can there be any association between this and the fact that toxemia is more frequent in the presence of a mole? Secondly, Knepper<sup>11</sup> and Rösle<sup>12</sup> have reported typical eclamptogenic lesions of liver and kidney in experimental animals by the injection of posterior pituitary extract and horse serum. Lastly, Evans<sup>7</sup> has shown that "gonadotropic hormone is abundant in the urine by the first missed period and reaches a maximum by the fourth to fifth month of pregnancy. In the toxemias of pregnancy, extremely high amounts have been encountered in the last third of gestation. The hormone disappears very rapidly following termination of pregnancy." When one interrupts pregnancy, one accomplishes two things: almost immediate cessation of toxemia and marked reduction in the concentration of pregnancy hormones.

## OTHER THEORIES CONCERNING THE TOXICOSIS

It does not seem tenable that the products of conception, as such, could in any way form a toxic substance which would be detrimental to the host. This theory has been suggested several times and more recently by some German writers. Egorov<sup>13</sup> maintains that the ovum is normal, and there is no specific toxin in the toxicoses of pregnancy, but that it is an allergic reaction because the

normal immunity of the mother toward the growing ovum is underdeveloped or absent. This especially is true in patients prone to metabolic disturbances. May not the "neurotic" patient, who more frequently develops toxemias, also be prone to more severe metabolic disturbances?

On the other hand, Jegerov<sup>14</sup> states that the toxicosis is due to a sensitization to the waste products of fetal metabolism. If there is a reaction to the products of conception or their waste products, why is the human being the only animal that manifests any evidence of toxemias? Why did Bergsma,<sup>9</sup> during nine years of practice in Java, never see a case of eclampsia? Why was there 50 per cent less eclampsia in Germany during the war than in peace times?

It may be possible that primiparae are more liable to toxemia than multiparae because they are experiencing their first major hormonal-allergic test. If so, may they not develop a desensitization to these allergens which is more or less permanent and so prevent toxemia from appearing later in the pregnancy or during subsequent pregnancies? The multiparous patient, with an allergic diathesis, would then be the one who has repeated toxicoses.

Irving<sup>15</sup> has recently published an article giving the pathology to be found in the preëclamptic and the eclamptic patient. The conclusion reached was that the essential lesion is an arteriolar spasm affecting especially the peripheral arteries of the brain, kidneys, and liver, although all arterioles were similarly constricted. He suggests that this spasm may be due either to stimulation of the vasomotor center or direct action on the vessels. The train of signs and symptoms found in the toxemic patient can be accounted for on this basis. Other authorities<sup>10-15</sup> have suggested that the liver and kidney lesions were of vascular origin due to the effects of toxins.

Bartholomew and Krake<sup>17</sup> reported that "hypercholesteremia due to hyperpituitary or hypothyroid activity was the fundamental basis for the toxemias of pregnancy," and that this is "further increased by a diet high in cholesterol-containing foods." What of the hypothyroid Eskimo, who lives on fish, meat, and blubber?

#### COMMENT

Treatment offers another source of conjecture because of diametrically opposed ideas. One reads of good results obtained from forcing fluids and limiting them, of satisfactory reports when proteins are given or restricted. The controversy of conservative and radical treatment continues to rage. In the end one is left to abide by his own judgment and experience.

Unlike syphilis or tuberculosis, which can give a multiplicity of pathologic and clinical changes due to one agent, we will probably find that in the toxemias of pregnancy we are not dealing with one specific factor, but an increased activation of toxins and allergens in association with hormonal influences.

Perhaps it is a pessimistic point of view, but as long as civilization makes its demands upon us to live a strained abnormal life and requires that we indulge in perverted diets, etc., pregnant women are going to continue to have toxicoses and eclampsia. At best, we can only reduce the incidence of each and prevent some deaths by prophylactic measures and quick action if our treatment proves ineffectual.

#### IN CONCLUSION

1. In 4,979 consecutive deliveries, 168 women (3.35 per cent) developed toxemia of late pregnancy. Twenty (12 per cent) of the toxic patients developed eclampsia.

2. There were two maternal deaths (1.2 per cent) and twenty-three fetal deaths (13.2 per cent, corrected mortality rate of 6.32 per cent).

3. Cesarean section was resorted to in fifty-nine cases, with no maternal deaths and seven fetal deaths (11.47 per cent, corrected mortality rate of 1.7 per cent).

4. Maternal and fetal mortality can be cut to a minimum if the pregnancy is terminated as soon as it is found the patient is becoming worse or not improving under conservative treatment.

5. In the case of fulminating and eclamptic toxemia, cesarean section is the delivery of choice, provided that rapid vaginal delivery cannot be done.

6. To prolong conservative treatment without definite improvement means increased damage to the cardio-vasculo-renal systems, with a resultant shorter life expectancy.

7. There is apparently a definite relationship between the early and late toxemias of pregnancy.

8. This relationship may be based upon an increased sensitization of the pregnant patient to toxins or allergens which in some way react to the greater concentration of pregnancy hormones.\*

2923 Webster Street.

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\* The author wishes to express sincere thanks to Drs. F. M. Loomis and J. W. Sherrick of Oakland for extending to him the privilege of using their private records for the statistical data contained in this report.



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## DISCUSSION

H. A. STEPHENSON, M. D. (490 Post Street, San Francisco).—This analysis of late pregnancy toxemias is a most interesting one. It shows the incidence, diagnosis, and treatment of toxemias as interpreted by a well-trained obstetrician having a large practice and employing the facilities of modern hospitals in the care of his patients.

Much stress has been laid on the importance and value of prenatal care. It should result in discovering the presence of toxemia in its incipency. The institution of prompt treatment at this stage will frequently avoid the more serious complications which come from the condition if allowed to continue too long. In this particular series the prenatal care averaged about five months per patient, which is considered adequate. The author brings out an interesting and rather surprising fact when he shows that about one-half of the multiparae had suffered from toxemia in previous pregnancies. This high figure makes necessary more careful observation and supervision of such patients. Personally, I have found that increased blood pressure is the earliest and most constant finding in toxemia. Doctor Campbell finds that albuminuria comes first.

There can be little criticism as to his procedure regarding treatment. Conservative or medical treatment which he outlines in some detail should be tried first. Should such treatment not result in satisfactory improvement, some procedure to bring about delivery is then indicated. The fact that there were twenty cases with convulsions leads me to believe that medical treatment may have been too long employed, and more prompt delivery might have forestalled some of these convulsions. In my own experience convulsions do not occur nearly as often as here reported (12 per cent). Cesarean section was employed in 35 per cent of these cases as the method of choice in terminating the pregnancy. Even in the patients with convulsions it was used in thirteen of the twenty cases. This would be severely criticized by many authors, and there are many articles in the literature which show that the mortality rate in patients suffering from toxemia with convulsions is greatly increased when cesarean section is done. The results obtained in this series, however, speak eloquently, as there were no deaths in the fifty-nine cesarean cases. The fetal mortality rate is in keeping with that which has been reported from other clinics.

The author is to be congratulated upon the excellent results obtained in this series. After all, this is the test by which work is judged.

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L. GRANT BALDWIN, M. D. (65 North Madison Avenue, Pasadena).—This paper is of interest to all practicing obstetricians, as it discusses a subject we all fear and respect. It differs from most similar reports inasmuch as it deals with a large group of private patients cared for under more or less ideal conditions rather than, as usually is the case, with a group of cases from some large hospital service. It quotes figures we can compare with our own experiences, and does not leave the usual implication that we are reading something somewhat foreign and of chief interest to the larger or teaching institutions. One's first reaction, on reading that 3.35 per cent of a series of 4,979 pregnancies developed sign and symptoms of toxemia, is one of astonishment that adequate prenatal care had not produced a lower incidence; however, more mature thought impresses one with the fact that, inasmuch as toxemias are still of such an unknown and disputed eti-

ology, this incidence is in reality quite low. However, it again proves our inadequacy to prevent these much-feared conditions, failure to prevent them even in the hands of most competent individuals. All of which leads to the conclusion that our methods of prevention are not improving materially, but that our hopes, for the present at least, must be placed in an early apprehension of toxicity, together with prompt and adequate treatment.

Both the believers in the strict conservative method of treatment, and also those who have advocated radicalism, have given ground until today; the majority favor a program essentially similar to that outlined by Doctor Campbell. His statement regarding the opposed theories of treatment, such as increased versus decreased fluid intake, exemplifies the fact that a strictly routine treatment is not advisable, and that each case must be treated on its merits. This rather supports his interesting discussion regarding the possible etiologic values of toxins, allergens, or hormones. This conception is new to most of us, and one difficult of proof; however, certainly not improbable. The massive amount of study now in progress, we hope, will lead to a more advanced understanding of the specific etiology of these conditions; then, and only then, can one hope to decrease the frequency of toxemias. Until then adequate prenatal care, plus prompt and systematic treatment of threatened toxemias with operative interference when conservatism fails, seem our only possible course.

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JOHN W. SHERRICK, M. D. (350 Twenty-Ninth Street, Oakland).—It is difficult to add much of importance to this paper, as Doctor Campbell has covered the subject well and carefully. This report reflects my own and Doctor Loomis' reaction to the whole subject of toxemia of pregnancy. We feel justly proud of these results, namely, a 1.2 per cent maternal mortality and a 6.3 per cent (corrected) fetal mortality, especially when one compares them with the high mortality rate (20 per cent maternal and 36 to 42 per cent fetal), as reported in the literature.

There are several points of special interest in this paper, such as, first, the high incidence of association between early toxemia of pregnancy with late toxemias; second, the tendency for recurrence of toxemia in subsequent pregnancies (50 per cent), thus indicating or favoring permanent kidney and liver damage; third, the persistent failure to arrive at an etiologic explanation of this picture.

Attempts at explanation of an etiologic factor still do not seem to have proof for the various theories. Doctor Campbell's suggestion of a sensitization reaction is ingenious and perhaps much more plausible than most of the others; but it is not proved, and I am afraid we must search further and delve more deeply for the answer. Certainly, it would seem to be a most complex phenomenon whatever is the explanation.

We have always felt that if toxemia patients do not definitely improve under intensive intelligent conservative treatment, their condition is progressing with increasing danger to the mother and her baby and all that this imposes in immediate and remote effects. In such circumstances we have favored relieving the burden by emptying the uterus by whatever method seems safest for both members. Our incidence of 35 per cent of cesarean section may seem high, but the excellent results of no maternal mortality and of only one fetal death—a percentage of 1.7 per cent after elimination of those babies who were too premature to have a chance of survival—more than justify the procedure. We have always felt that this method, instituted relatively early, inflicts the minimum of trauma and stress upon the mother and her babe, and offers the quickest and safest means of relieving the toxic burden imposed upon both, thus preventing avoidable, inexcusable, and dangerous trauma to the baby and to the mother's cardiorenal-vascular system. I think the results reported here will stand comparison with any series treated by the so-called conservative measures. The secret of such success depends on having had these patients under constant prenatal supervision and control; in having available every facility for carrying out adequate care, and in knowing when to interfere. Under such circumstances and with trained obstetricians, so-called radicalism becomes intelligent conservatism.

## SILICOSIS\*

By HAROLD H. F. BEHNEMAN, M.D.  
San Francisco

DISCUSSION by Howard E. Ruggles, San Francisco;  
Sidney J. Shipman, M.D., San Francisco.

THE most ancient of working men's maladies becomes, rather suddenly, an industrial octopus—firm, far-reaching, and formidable. The ancient "disease of stone cutters," recognized by Hippocrates, recorded by Agricola ("De Re Metallica," 1556), Paracelsus (1567), and De Ramezzini (1671 and 1705), now appears as the most important industrial disease problem in America today.

## INCIDENCE

Over a half-million persons are exposed to silicosis in this country. While tuberculosis has decreased over half, silicosis has increased over thirteen times. The activity of the legal profession, plus the shameful "expert" testimony of certain of our colleagues, is in a large way responsible for the recent claims and litigation now being considered, particularly in California, Ohio, New York, and Illinois.

In the latter state, in three years (1933 to 1936), suits have been pending, the paper value of which is \$100,000,000. One company alone is defending claims of \$10,000,000, all filed in this three-year period. In our own State the claims against just one company (California State Compensation Insurance Fund) have been so numerous that special legal counsel has been necessary for their exclusive handling.

This is a paper on an industrial medicine topic; therefore a clinical exposition of this disease entity is not forthcoming in any detail, but may be obtained in a late publication.<sup>1</sup> Suffice it to say here that the etiology is inhaled free silica ( $\text{SiO}_2$ ), usually microscopic. As the tools and technique of industry have become more accurate, powerful and advanced, so have the dust particles become finer and more pure. The important etiologic factor is that the lung injury is not traumatic or mechanical, but a chemical assault.

## SILICOSIS DIVIDED INTO THREE STAGES

Clinically, the disease is usually divided into three stages, variously named, but universally accepted in this country as well as in England, Canada, and South Africa. The cardinal symptom of silicosis is dyspnea; the cardinal sign is decreased chest expansion. The first stage presents a pretty healthy picture with usually only two findings to create suspicion—a dry cough and a limited chest expansion. The second stage reveals exacerbation of the first stage plus chest pain, expectoration and hemoptysis, dyspnea, and impaired working ability. In the final stage the dyspnea is marked and distressing; cough is harsher and more constant; there is usually copious expecto-

ration, weight loss, and all the signs of decreased pulmonary function.

Nationality plays no part, as no race is exempt.

Age in itself, also, seems to play no part. The majority of the patients are in the latter half of their third decade—probably because they have worked about long enough to produce symptoms.

Any constitutional defect speeds up the progress of the disease, particularly lues, tuberculosis, and other respiratory-tract infections.

The average period of development of silicosis in those exposed is ten years; yet it may be two or twenty-five.

The severity depends on three factors:

1. The number of dust particles per cubic foot.
2. The amount of silica in the dust.
3. The frequency and duration of exposure.

## TREATMENT

So much for the clinical picture. The treatment is the treatment of tuberculosis—rest and constitutional measures, to increase the general health and resistance to other disease. Of course, withdrawal from contact with dust is necessary. The latter, however, has often taken place before the diagnosis becomes apparent—from days to years. The prognosis is good in the first stage, fair in the second, and poor in the third.

## RELATIONSHIP OF TUBERCULOSIS TO SILICOSIS

Now a very controversial question enters the picture. What is the relationship of tuberculosis to silicosis? The answer is the opinion of the one who replies. First, let us acquaint ourselves with a few known facts:

1. Seventy-five per cent of silicosis sufferers die of tuberculosis.
2. The tuberculosis factor may appear in any state of the disease.
3. A quiescent tuberculosis may be reactivated by exposure to silica.
4. The more extensive the silicosis when tuberculosis first appears, the more rapid the progress of the tuberculosis and the death of the afflicted.

Those are facts. Now, answering the initial question, it is my personal opinion that every silicosis victim is or was an active, quiescent or potential tubercular, or silicosis would not gain the headway it does; nor would tuberculosis kill 75 per cent of silicosis victims, as it does.

## IMPORTANT FACTORS IN DIAGNOSIS

So far, two very important factors in diagnosis have not been discussed here. The first is of tremendous importance, being the necessity of a long, accurate, detailed industrial history of the patient. Unfortunately, we often have to employ private investigators over a long period of time to get such a history, as many of the claimants seem to have a memory strangely at fault when it comes to answering questions. That history should go back to the first working days of the individual. The last, and yet often the first all-important factor in diagnosis, is the x-ray examination.

\* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

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I believe that most experienced roentgenologists feel that the roentgen picture of a man's chest reveals a fair index of a man's "respiratory past." Therefore, only the trained, experienced eye should formulate an opinion regarding silicosis from a roentgenogram. There is evidence of many respiratory tract experiences in a chest picture. Yet I realize very often our only positive evidence of silicosis is in a film. I am merely pleading for interpretation by a qualified roentgenologist.

The silicotic lung, uncomplicated with tuberculosis, for instance, in the first and second stages shows a distinct, individual x-ray appearance. The pathology is one of increased fibrosis, is always bilateral and never limits itself to a particular isolated area in the lung. It appears as a beady or reticulated fibrosis and is found in the hilar areas, extending peripherally like the branches of a tree. The apices and bases are the last to be affected, if at all.

#### INDUSTRIAL AND LEGAL ASPECTS OF SILICOSIS

Now a few words about the industrial aspects. Suits on file in this country now aggregate, on paper, about \$500,000,000. Reputable and disreputable members of the legal and medical professions are largely responsible for this deplorable situation. A review of most of their hearings and trials leave an honest practitioner of medicine or an honest lawyer sorely disgusted and distressed about so-called "expert testimony." The vast majority of these claims are presented in courts; juries are often ignorant, biased, generous, and bewildered. They often do not know whom to believe, and give the benefit of the doubt to the ailing (?) claimant.

Also the statute of limitations for filing claims or suits in this State now has an indefinite time limit. As a result of the Marsh case *et al.*, the Supreme Court considered that a man is not suffering from an occupational disease until he has definite belief or information that his symptoms are related to the work he was doing—even if it were years before.

#### SOLUTION OF THE PROBLEM

What is the solution to two problems—the prevention of the disease, and the honest disposition of half a billion dollars' worth of claims? The solution in prevention holds many immediately feasible possibilities. I mention the following measures which appear to me to be practical:

1. Compensation laws that will allow and recognize the physical and radiologic examination of men applying for employment in dusty trades.
2. Periodic physical and roentgen examination of those at work in these trades. This would allow rejection of the unfit and a warning to those with early evidence of silicosis.
3. Preventive measures at the site of the employment, such as:
  - (a) Analysis of dust particles per cubic foot of air.
  - (b) Increased ventilation, *i. e.*, air velocity.
  - (c) Wet drilling, grinding, etc.

- (d) Control of dust at its point of generation.
- (e) Determination of what is a harmful dust.
- (f) Tuberculous workers prohibited from dusty or underground employment.
- (g) Standardization of records, examinations, and inspections.
- (h) The ascertainment of dust hazard for each trace, and the threshold limits of safety.
- (i) The use of an efficient respirator.
4. The creation of a medical board of appeal who would determine the justice and propriety of a claim leading to the law courts.
5. Compensation award should be made only on the occupational disability of the claimant.
6. First-aid safety measures by the employer:
  - (a) Filtering plants for water.
  - (b) Bath houses.
  - (c) First-aid stations.
  - (d) Easily obtained and low-cost medical care.

#### DISPOSITION OF SILICOSIS CASES NOW PENDING

Finally, we come to the problem of the present—the disposition of the hundreds of cases now pending, a few legitimate, but the vast majority undeserving and unwarranted.

1. The answer is immediate and close coöperation between the legal profession, the doctor and the employer. The courts should only allow an expert witness of the highest caliber to testify regarding x-ray interpretation. The local or national Roentgen Ray Society should either approve of the expert, review the testimony of so-called experts, or both.

2. Employers *must* spend money to analyze dust hazards, both to eliminate them for the future, and to ascertain whether any hazard has really existed heretofore.

3. Modern legislation by states covering all industrial diseases, with special reference to those peculiar to the various trades and occupations.

4. Eliminate the quack and charlatan in medicine and in law. That job is the duty of the ethical medical and legal societies. A "visiting court committee" from the county or state medical society should sit in on cases where expert medical testimony is given. The Bar Association should investigate and properly chastise the ambulance-chasing lawyers, some of whom have handled dozens of cases, employed the same doctor in as many as seventeen suits, combed the wards of county and other hospitals for patients who worked in industries, etc.

#### IN CONCLUSION

To me, however, the most important move for everyone's benefit is the creation of a medical board of review, that board to decide whether or not a case is compensable at all; then a lay commission to decide to what degree, "occupationally speaking," that claimant is disabled. Those two procedures should result in justice to the claimant, the employer, and the insurer. They would also stop suits in our courts with their evils of cost, unexpert testimony, jury verdicts, delays, and grossly unfair awards.

California was a leader in compensation laws to protect the worker. The State, therefore, may well be one of the first to protect industry and the employer!

384 Post Street.

#### DISCUSSION

HOWARD E. RUGGLES, M.D. (384 Post Street, San Francisco).—From the x-ray standpoint, an ideal arrangement would be to secure at least one film of every individual before his employment in a dusty occupation. A man with evidence of an old or latent tuberculosis should, of course, be excluded from any such occupation. Practically, this ideal is unattainable, at least at the present time, but employers and insurance companies would find that a roentgenological survey of employees subject to dust hazard, once in three to five years, would more than repay the expense incurred.

As in so many other conditions, the earliest stages of silicosis give no characteristic roentgen picture. The first recognizable evidence of the disease is an enlargement of the hilar shadows and a thickening of the bronchial markings, particularly those toward the bases of the lungs and posteriorly. There next appears a variable amount of pleural thickening, followed by the development of the characteristic silicotic nodules in both lung fields. These are rounded areas of increased density, 3 to 5 millimeters in diameter, with hazy margins, usually scattered fairly symmetrically in the lung fields, particularly in the posterior halves. With continued exposure, these nodules enlarge and coalesce, as the result of a progressive fibrosis. The process ends in a terminal tuberculosis or, less commonly, cardiac failure, due to interference with the lung circulation. In many cases where films of the individual are not available until the later stages of the disease, it is difficult to decide how much of the fibrosis present is due to the underlying silicosis, and how much to the secondary tuberculosis. Earlier films in such cases would be invaluable.

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SIDNEY J. SHIPMAN, M.D. (490 Post Street, San Francisco).—Doctor Behneman has written a timely and comprehensive analysis of the silicosis problem. Fortunately, the importance of this disease is now generally recognized. The means of prevention are fairly well understood, and the outlook, therefore, much brighter than it has been at any time in the past. The fact that silicosis is *per se* one of the purely industrial diseases and, therefore, involves a pecuniary factor of great importance, has no doubt greatly accelerated its study and prevention.

There are one or two minor points in Doctor Behneman's paper which, while not highly important, might be put to argument; whether, for example, the etiology of the pulmonary injury is not traumatic or mechanical, but a chemical assault, might be questioned. There are still those who believe that the mechanical factor is not unimportant.

In discussing the importance of tuberculosis as a complicating factor of silicosis, Doctor Behneman does well to point out that most silicosis victims sooner or later develop tuberculosis. The importance of this observation emphasizes the necessity for adequate antituberculosis measures in communities where the silicosis hazard is high, as in the Mother Lode district of California. The California Tuberculosis Association has recognized this field as a new arena for concentrated endeavor, and it is to be hoped that the measures now in use for the prevention of tuberculous infection and disease will be applied more intensively in the future in these communities.

The other methods of prevention, in the occupational sense, have been adequately described by Doctor Behneman. The various measures for eliminating dangerous concentrations of dust particles are, of course, highly important, although in this connection it is somewhat questionable whether respirators really furnish much protection, or whether they merely give a false sense of security and thus lead to abuses. As far as periodic examinations are concerned, there seems to be a perfectly understandable but, from the medical standpoint, unjustifiable opposition on the part of labor unions. These unions must be won over to the medical viewpoint by proper

education, when I feel sure their enthusiastic coöperation can be enlisted.

As Pierson has repeatedly pointed out, what we need in California is an impartial silicosis commission or silicosis institute, probably connected with one of the large universities, for the purpose of studying the problem as it affects California, and furnishing impartial advice and testimony wherever needed.

### THE SO-CALLED "STRADDLE" INJURY: ITS MANAGEMENT\*†

By EDWARD W. BEACH, M.D.  
Sacramento

DISCUSSION by Thomas E. Gibson, M.D., San Francisco; Jay J. Crane, M.D., Los Angeles.

IT was Plato who said, "All science is but remembrance," and we seek herein remembrance and recapitulation of certain basic facts with regard to this type of injury rather than the promulgation of any novelty or innovation.

#### REASONS FOR THIS ARTICLE

The reasons for this article are several, all of which seem important to us.

1. These straddle injuries are fairly common in industrial practice. They should, therefore, interest the surgeon to whom the unfortunate man first applies; the urologist who may be called because the urethra is frequently involved; and last, but not least, the insurance carriers, because they pay the bills.

2. There is little to be found in standard textbooks concerning these straddle injuries, and this little is handled in rather a perfunctory and empirical manner. Usually no attempt is made to rationalize their treatment. Elaborate embroidery patterns for urethral anastomosis are artistically demonstrated and often advised under these circumstances, which makes one with experience conclude that many of these cases were purely hypothetical, and treated in the "mind's eye" rather than at the bedside.

3. It has been our observation that many otherwise most excellent surgeons view this type of injury askance and with a commingling of awe and horror somewhat akin to Magellan's feelings when he first beheld the Southern Cross in navigation of the equatorial zone. This may be a tribute to enthusiastic urologic propaganda, but at any rate the male urethral perineum is still hallowed ground for most general surgeons in point of fact, and occupies with them about the same status today as in the era of the Collots. Taken all in all, perhaps no injury is viewed by them with more consternation, foreboding, perplexity and uncertainty than one which occurs in the urethral perineum in the male.

\* Read before the Urology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

† An apology is due the strict grammarian for our legerdemain with the word "straddle." To assume this license in a scientific article is, doubtless, reprehensible. However, for the surgical mind the erstwhile adjective "straddle" has a deeper and different connotation. It represents a concise, graphic and descriptive, if somewhat loose and ungrammatical, method of grouping a common industrial accident. Moreover, frequent technical application in this connection has liberalized and almost standardized this grammatical error in this way among the profession.



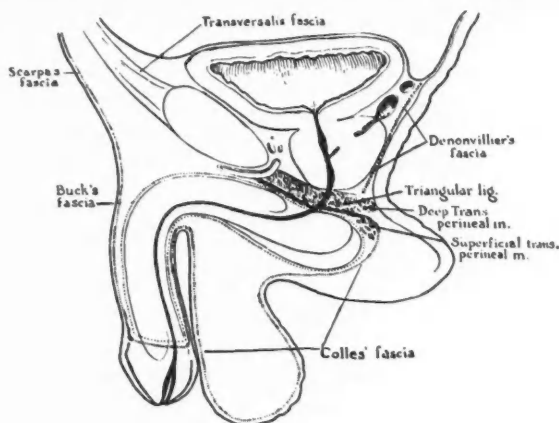


Fig. 1

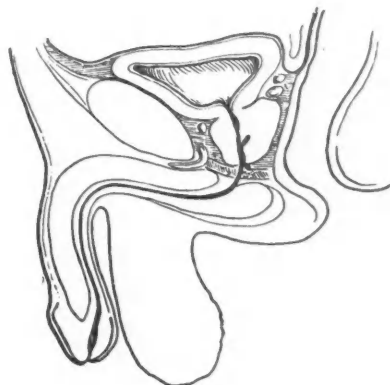


Fig. 2

Fig. 1.—Fasciae of importance in urinary extravasation (after Wesson). Colles's fascia is concerned in nearly all extravasations and its abdominal continuation. Scarpa's fascia is less frequently involved. Intrapelvic extravasations are least commonly observed.

Fig. 2.—When extravasation originates on the pelvic side of the triangular ligament, retroprostatic, perirectal and ischioirectal infiltrations are most commonly observed, although perivesical involvement may occur.

4. We, therefore, seek to review and clarify this subject in a practical way, hoping to dispel some of this mysticism anent the perineum and injuries therein.

5. Finally, it has been our good fortune to have treated a number of these straddle cases. We have adduced, from their care at the bedside, certain principles which have helped us. We will attempt to set forth these principles, with a hope that they may help others also.

#### ANATOMIC FACTORS

##### Site of Injuries.

From the standpoint of mechanics, when an individual falls astride a flat, unyielding surface such as a timber, the soft tissues and urethra of the perineum are commonly pinched between the timber below and the undersurface of the pubic arch, or the transverse ligament above.

In such an accident, with the force applied more or less at right angles to the perineal surface, the bulbar urethra is seldom injured, although it is nearest the surface, most exposed in position and relatively extensive in spread. From an anatomical standpoint (Drawing A), it is seen that the urethral lumen traverses the bulbar expansion in such a way that approximately two-thirds of the surrounding erectile tissue is beneath the urethra itself, or between the latter and the perineum. This tissue acts as a cushion, therefore, to the urethra. Moreover, the bulbocavernosus muscle likewise furnishes additional protection to the bulb itself.

Thus, when the perineum receives a sharp blow or is subjected to a crushing force (as in a fall astride a broad, immobile surface), these anatomical bulwarks usually render the bulbar urethra immune. Instead, by virtue of that dense fascial sheath, the superficial layer of the triangular ligament, this force is transmitted to and brought to bear upon the weaker and unfortified abutting membranous structure, *i. e.*, the terminal or distal

membranous urethra. Furthermore, this terminal membranous urethra invites injury because of its unusually thin-walled structure and its relatively fixed position in close proximity to the pubis and ischium. A point of great practical importance in this connection is that since most strictures are located in or near the bulb, this natural thinness of the membranous structure is enormously enhanced by the dilatation behind such an impediment and its vulnerability to trauma proportionately increased. For these reasons, therefore, partial rupture often accrues in the distal membranous urethra in the ordinary type of straddle accident, and in our experience the floor is most often involved, leaving the roof intact.

There is now a second and distinctly different type of injury which primarily implicates the bulb. Force of a tangential nature is brought to bear upon this structure either from the side or more often from the rear. Because of this violence the bulb is dislocated or torn from its attachments to the triangular ligament and thrust forward often over the anterior surface of the pubis, which ordinarily assumes an angle of about 30 degrees with the horizontal. In this mechanism avulsion or complete rupture of the urethra transpires again in this distal membranous structure or in the immediate vicinity.

##### Extravasation Possibilities.

The practical surgeon, with regard to extravasation, considers the urethral perineum like Caesar's Gaul—to be divided into three parts, to wit: (1) territory within the superficial perineal interspace; (2) territory between the inferior and superior layers of the triangular ligament or urogenital diaphragm; and (3) territory above or proximal to the superior layer of the triangular ligament. For completeness, it is also necessary to take cognizance of a fourth territory concerned more often with rupture of the pendulous urethra, namely, extravasation between the layers of Buck's fascia. In certain instances when urethral rupture

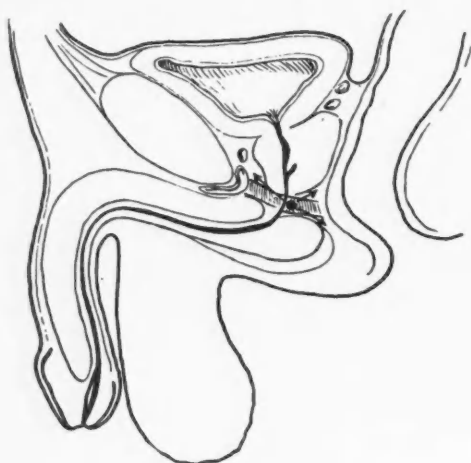


Fig. 3

Fig. 3.—If extravasation originates within the triangular ligament, extension occurs in either direction, most often externally.

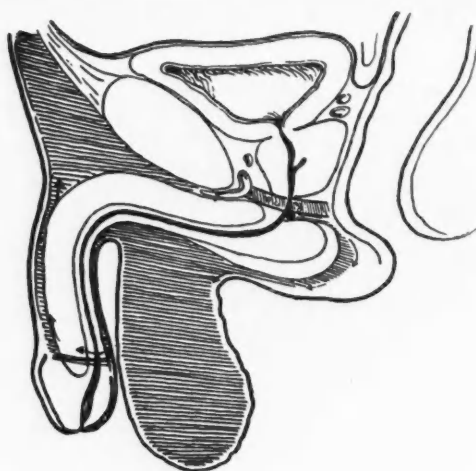


Fig. 4

Fig. 4.—Spread of extravasation when primary focal lesion is anterior to the triangular ligament. A course bounded by Colles's and Scarpa's fasciae is pursued.

occurs at the root of the penis within the sheath of the corpus cavernosum, the advancing extravasation is confined to very narrow limits by a special fascia. This fascia, as described by Buck, is a membranous sheath completely encompassing the corpus cavernosum, and taking its origin above and behind from the suspensory ligament and below from the perineal fascia. It invests the corpus cavernosum closely and is bound to the corpus spongiosum above by two reflections, one of which passes above the latter and the other beneath.

The superficial perineal interspace holds the most interest for the straddle surgeon. It will be recalled that the vulnerable portion of the membranous urethra (the distal portion) lies in this interspace. Extravasation here cannot go upward because of the dense inferior diaphragmatic fascia, nor can it go backward into the ischiorectal region because of the deep layer of the superficial fascia (Colles's), which fuses with the former at the base. Moreover, the extravasation cannot spread into the thighs, because both the inferior ligament and Colles's fascia attach laterally to the pubo-ischiatic rami. Hence, the tumefaction confined beneath Colles's fascia tends to advance forward over the perineoscrotal angle into the scrotum, and later up over the pubes.

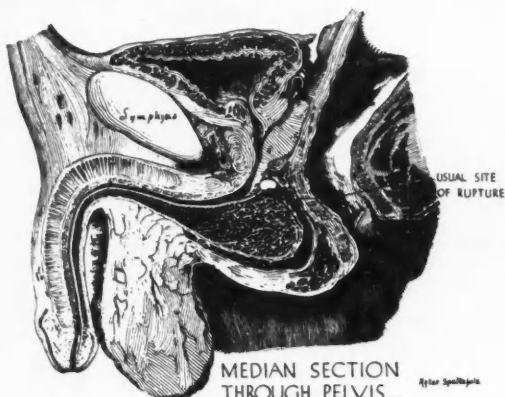
That portion of the membranous urethra between the inferior and superior layers of the triangular ligament is sometimes involved in these straddle injuries, and particularly by puncture wounds. Should accumulation take place here it remains confined for a time, and then may slough through either ligament, *i. e.*, down into the superficial perineal interspace or up into the territory above the deep layer of the triangular ligament. However, any extravasation proximal to the superficial layer of the triangular ligament may seep backward into the ischiorectal region and buttocks or into the thighs.

The territory above the superior layer of the triangular ligament is seldom concerned in these accidents save by puncture wounds. In these cases the extravasation is held forward by Denonvillier's fascia and often, by pushing up the peritoneum from the bladder, passes into the cave of Retzius. In two puncture cases involving the deep urethra (these may have involved the proximal membranous structure with rupture of the deep triangular ligament), in this series we found perhaps a quart of blood and urine in this area while performing cystotomy. On the other hand, the extravasation may at times extend retroperitoneally up to the diaphragm.

#### CLINICAL MATERIAL

This article is based on sixteen of these straddle injuries seen by the author in the last twelve years of practice. Many were seen in consultation at small hospitals in northern California. Several were seen at the Jones Memorial Hospital in Grass Valley, among gold miners, through the courtesy of Doctors Carl Power Jones and Walker Reed. For others the author is beholden to his surgical brethren in the peripheral area and to the insurance carriers. It is well to remember in this connection that the urologist is consulted only in the complicated and more difficult cases.

The oldest man in this series was fifty-six and the youngest, fourteen. Most were husky workers in the prime of life. Nearly every sort of object was straddled, *viz.*, a bench support, a stepladder, a fence, a curb, a stump, a rock, a steel rail, but most often a piece of timber used as a brace in the mines. The mechanics of the accident remained virtually the same throughout. Variants involved (a) the distance fallen, and (b) the contacting surface. (a) The distance fallen was difficult to estimate in many cases. The shortest distance was approximately two feet, and the longest



MEDIAN SECTION THROUGH PELVIS—  
Note erectile tissue beneath bulb.

Drawing A

almost twenty feet. The distance dropped offered no index as to the urethral lesion except in the broadest possible sense. In two stricture cases the fall was trivial, while in the longest drop little urethral damage accrued. (b) Contact was most often with broad or blunt surfaces—therefore, the twelve closed cases in this series as opposed to the four puncture or open cases. None of the latter involved the rectum.

#### ANALYSIS OF THE CLINICAL MATERIAL

Under this caption subheadings have been arranged for convenience and simplicity, and whenever possible appropriate deductions made.

#### 1. Urethral Injury.

These injuries comprised three general groups: (a) partial rupture on the floor of the distal membranous structure of which there were eight cases; (b) complete urethral rupture often by tearing loose the bulb from its fixed position of which there were four cases; and (c) four puncture wounds, of which one involved the membranous urethra, one the bulb directly, and two either the proximal membranous urethra or the distal pros-

tatic urethra. The exact nature of the urethral lesion was difficult to estimate; but when catheterization was possible it was assumed that the rupture was incomplete.

#### 2. Preëxisting Urethral Strictures.

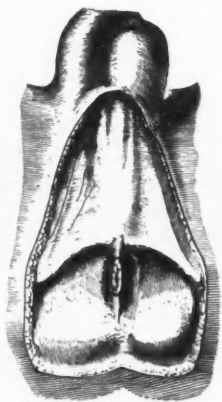
Incidentally, two men in this series had a penile hypospadias. Seven of these sixteen cases presented evidence of stricture. The high incidence of the latter finds explanation both in the great prevalence of this fibrous legacy, and as to its pertinent application from an anatomical standpoint. Moreover, most strictures are ineffectually and inadequately treated because of the sufferer's attitude, which may be crystallized thus: "The devil was sick, the devil a monk would be; the devil was well, the devil a monk was he." Most of these individuals quickly acquire this disposition to avoid treatment, from which nothing can dislodge them except another attack of acute urinary retention.

#### 3. Urinary Retention.

Only five of these patients were able to void spontaneously after the accident. Three refused subsequent treatment after catheterization, and two returned a few days later with urinary extravasation. Moreover, the author has seen three other patients who presented the clinical picture of urethral rupture, but refused examination because they were able to void without difficulty, and one later developed extravasation. It is, therefore, our conviction that when the urethra is injured and there is broken continuity, the act of voiding by reason of the vis a tergo forces the urine out into the tissues and favors extravasation.

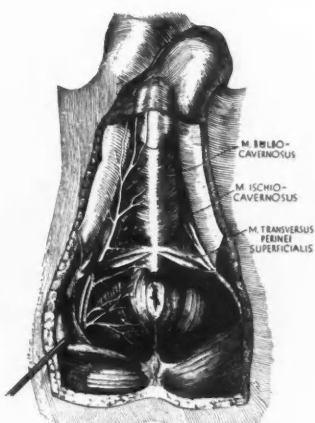
#### 4. Perineal Appearance.

This ranged from slight ecchymosis to a large hematoma, but offered no exact criterion as to the urethral lesion. Only slight ecchymosis (particularly in stricture cases) may accompany a badly ruptured urethra. Many times the swelling in the perineum is extraordinary. In these cases the region about the vascular bulb is traumatized so that blood is poured out beneath Colles's fascia. This



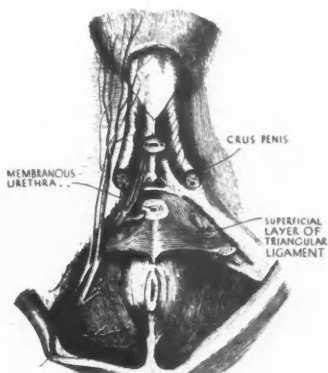
COLLES' FASCIA

Drawing B



THE SUPERFICIAL PERINEAL INTERSPACE

Drawing C



ROOF OF PERINEAL INTERSPACE WITH BULB REMOVED (After Baran)

Drawing D



TABLE 1.—*A Résumé of the Clinical Material*

Initials	Nature of Accident	Catheterization	Type of Injury	Preexisting Stricture	Urinary Retention	Treatment
M. B.	Caught in steam shovel, dropped astride sharp rock.	Impossible	Puncture wound involving proximal membranous urethra.	No	Yes	Cystotomy — later indwelling catheter.
C. B.	Slid down telephone pole, astride iron rung.	Impossible	Puncture wound proximal membranous urethra.	No	Yes	Cystotomy—indwelling catheter.
G. D.	Tumbled off cultivator, astride spiked wheel.	Impossible	Puncture wound membranous.	Penile hypospadias tight orifice	Yes	Cystotomy—retrograde indwelling later.
C. O.	In garage pit, astride bench support.	Impossible	Complete.	No	Yes	External urethrotomy.
P. P.	Astride timber brace in mine.	Impossible	Puncture wound involving bulb. Complete.	No	Yes	Cystotomy—retrograde indwelling later.
A. S.	Astride timber brace in mine.	Possible	Incomplete.	Yes	Yes	Indwelling catheter.
W. R.	Astride timber brace in mine.	Possible	Incomplete.	Yes	Yes	Indwelling catheter.
S. H.	Astride fence rail.	Possible	Incomplete.	No	No	Refused—subsequent extravasation.
G. V.	Astride stump from ladder.	Impossible	Complete.	Yes	Yes	External urethrotomy.
M. O.	Astride seat arm, in theater.	Impossible	Complete.	No Penile hypospadias	Yes	External urethrotomy.
C. L.	Astride limb in tree-pruning.	Possible	Incomplete.	No	No	Indwelling catheter.
P. H.	Astride saddle horn, horse stumbled.	Possible	Incomplete.	Yes	Yes	Indwelling catheter.
S. G.	Astride steel rail	Impossible	Complete.	Yes	Yes	External urethrotomy.
W. W.	Astride curb.	Possible	Incomplete.	Yes	No	Refused; extravasation.
S. L.	Astride step ladder.	Possible	Incomplete.	Yes	No	Refused; no extravasation.
E. B.	Tumbled off garage astride fence.	Possible	Incomplete.	No	No	Indwelling catheter.

hematoma effaces the perineoscrotal angle and swiftly advances into the scrotum. In other cases the scrotal tissues receive direct violence as part of the accident. These two confluent structures (the perineum and scrotum) then comprise a purplish mass extending nearly to the knees.

#### 5. Bleeding From the Penis.

This was common, independent of micturition, and often persistent, but of small volume. It offered no index as to the urethral damage.

#### 6. Pain and Tenderness.

This was always present in the perineum. Urinary retention provoked the greatest pain in most cases.

#### 7. Shock.

This was greatest and most prolonged in the puncture cases. Bleeding from these wounds was also usually profuse, but never serious. The shock is often negligible in the ordinary straddle injury.

#### 8. Complications.

Urinary extravasation was fairly common. This occurred in three cases, but only in one treated with an indwelling catheter. This tumefaction was promptly evacuated with a perineal incision, which

sufficed for cure. In the other two cases an external urethrotomy was done and the bladder drained by means of a tube through the proximal urethral segment. Free incisions were made into the advancing mass. In one case the extravasation was very troublesome, advancing into the scrotum despite free incisions, and finally onto the abdomen just above the pubis. It is our belief that the final chapter with regard to extravasation in its various phases has never been written, although its behavior from an anatomical standpoint is quite clear. Four cases in this series also developed an epididymitis.

#### 9. Sequelae.

The most common sequela was a post-traumatic stricture at the site of urethral injury. It was roughly proportionate to the original damage, and was least in the cases treated by an indwelling catheter. It was never troublesome, but required occasional dilatations consonant with the contraction speed, generally at brief intervals in the beginning and a matter of months later. Three of our external urethrotomy patients complained of temporary impotence, and in one it persisted for nearly twelve months.

## MANAGEMENT

*Concerning Treatment.*

The fundamental objective is to divert the urine from the site of urethral injury and, incidentally, in many cases to relieve acute urinary retention. We have, therefore, three avenues of approach, used singly or in combination: (1) the catheter, (2) external urethrotomy, (3) cystotomy.

1. An indwelling catheter for seven to ten days is usually adequate for partial urethral rupture. It splints over the lacerated area and favors healing. The traumatic urethritis incident to the catheter does not appear to retard healing. A patient, dextrous and gentle attempt at catheterization should be made in every case before surgery is undertaken. It is often facilitated by anesthesia. If it is not successful, then surgery must be resorted to without delay.

*Technique of Catheterization.*

Technical difficulties increase with lapsed time after the injury. Only a filiform is used at the outset because (a) many patients have preexisting strictures in the penile urethra or about the bulb; (b) the bulbar urethra is often compressed, angulated, or displaced either by reason of the violence or contiguous hematoma or both; (c) the filiform hugs the roof better than other instruments; (d) and the filiform does not tend to increase the urethral laceration as a catheter nib or sound point might do. Once the filiform enters the bladder the rest is easy. This procedure is carried out under aseptic conditions, and then the catheter end is kept as sterile as possible. Five of our cases were successfully treated in this manner, with slight urinary extravasation in one.

2. An external urethrotomy is not always successful under these circumstances. With a large perineal hematoma it is best avoided, in our opinion, because of distortion, extravasated blood and altered anatomical landmarks. Moreover, the proximal urethral segment tends to retract particularly in the lithotomy position. The use of a filiform as a searcher and manually bringing the patient nearer a supine posture (lowering the legs and working beneath) after the exposure is made, have both helped us at times to discover the illusive upper segment. Once the proximal segment is located, the usual indwelling catheter is employed in the regular way. No attempt to suture the urethra was made by us, because in the dorsal decubitus the two ends come together anyway and healing appears just as rapid without the sutures. External urethrotomy was done four times in this series for the rupture and twice for extravasation developing later.

3. Cystotomy is the sheet anchor in all of these cases. This is especially true in puncture cases where the exact depth and extent of the wound is unknown. The urine should be drained a few days and then a secondary attempt made to pass the catheter in the regular manner or retrograde with the help of a perineal incision. Cystotomy was necessary in four of these cases. Twice we resorted to retrograde catheterization with the aid

of a perineal incision. In the other two catheterization was easily done seven or eight days subsequently.

## CONCLUSIONS

Based upon our experience with these sixteen cases, we venture the following generalizations anent their management:

1. Every case of urethral rupture, whether partial or complete, should be hospitalized. This particularly concerns the gentleman who voids spontaneously after the accident, because he is the most difficult to handle and most often develops complications.
2. The truth with regard to treatment lies somewhere in the middle of the road between ultra-conservatism and meddlesome radicalism.
3. Each case is a law unto itself and must be handled accordingly.
4. Many partial ruptures when catheterization is possible do well with no complications on an indwelling catheter.
5. If catheterization (and it should be attempted) is impossible, surgery must be undertaken without delay.
6. Surgery should be bold and direct, but as simple as possible. Surgery devoid of fancy work, frills, and time-consuming maneuvers gave us the best end-results.
7. Surgery must not be too extensive at one session. Better to drain the urine and get out. After a few days of rest, one is agreeably surprised at the ease of subsequent accomplishments.
8. When sound surgical judgment is used, the results are gratifying and no group of patients more appreciative.

306 Medico-Dental Building,  
1127 Eleventh Street.

## DISCUSSION

THOMAS E. GIBSON, M.D. (450 Sutter Street, San Francisco).—Straddle injuries fall into two clinical groups: (1) immediate and (2) late. Doctor Beach has clearly outlined the salient features of treatment with respect to the immediate group. Emphasis should be placed on strict asepsis in handling these cases. One should have as much respect for the urethra as for the peritoneum. It is not enough to cleanse the external genitalia, but in addition the anterior urethra should be thoroughly irrigated with an antiseptic solution before catheterization or instrumental manipulation. Measures taken to minimize infection will minimize the occurrence of peri-urethritis at the site of injury with resultant scar tissue proliferation and stricture formation, which is the bane of this type of injury. Great discretion is likewise necessary in the use of the indwelling catheter in these cases, because an indwelling catheter in any case produces urethritis. This may cause peri-urethritis at the site of injury, with an increased tendency to later stricture formation. If an indwelling catheter is used at all for splinting purposes, it should be for as short a time as possible, and a size 18 or 20 F. is recommended, rather than a 24 or 26 F. The more tightly the catheter fits the urethra the greater is the resultant urethritis. Doctor Beach's statement that an "attempt at catheterization should be made in every case before surgery is undertaken" is at variance with the opinion of several authorities. Garlock (1923) states that any case presenting the symptoms of inability to void, perineal hematoma, bladder distention and urethral bleeding should be considered an emergency, and operated upon as soon as possible. Perineal, scrotal or pelvic extravasation of urine, when not relieved with a reasonably short space of time, invariably becomes infected, to be followed in succession by necrosis, sloughing of the soft parts, spread-

ing of infection, grave sepsis, and death. This fact constitutes the strongest argument for early operation where rupture is suspected, or diagnosed with certainty. Under no condition should preliminary catheterization be attempted in the face of this syndrome, which is practically always accompanied by a complete or almost complete rupture of the urethra. Attempts at catheterization increase trauma, create false pockets in the perineum, cause fresh hemorrhage, introduce infection, and in some cases convert an incomplete to a complete tear. Furthermore, even though one succeeds in passing a catheter to the bladder under such conditions, the ultimate result after healing has occurred is generally stricture formation due to the intense peri-urethral infiltration and reaction. Stricture formation is what we desire especially to prevent, because once present it is generally vicious and may require operation later. In other words, Garlock feels that by not using the indwelling catheter the tendency to stricture formation is lessened. The procedure to be followed in these cases, then, is drainage of the perineum and suprapubic cystostomy, letting nature attend to the healing of the urethra. After the initial traumatic reaction has subsided it may then be advisable to use an indwelling catheter, provided the urethra does not close spontaneously.

Even though the original straddle injury has been so slight as to produce no actual rupture or tear in the urethra, the patient may experience stricture formation and even complete retention coming on weeks, months, or even years later. It is imperative, therefore, even in slight injuries which do not interfere with urination at the time, to have these patients report periodically for dilatation with sounds for a long time, thus obviating late stricture formation. Traumatic strictures are notoriously more resistant and difficult to deal with than strictures of gonorrheal origin. It is of interest, as Lowsley has pointed out, that many of these straddle-injury cases suffer the occurrence of sexual impotence.

The late cases, which are often seen as a result of inadequate early treatment (and sometimes in spite of adequate early treatment), offer serious problems which may tax the skill and resourcefulness of the urologist to the utmost. The chief problem of the late case, seen perhaps months or years after the original injury, is the management of stricture, which is generally of a most rigid and refractory type. An attack of complete retention of urine may be the presenting symptom which makes the patient seek urgent relief. Filiforms and followers are called into play, but if they cannot be passed, cystostomy or external urethrotomy is mandatory, depending upon one's judgment in the individual case. Incidentally, if the stricture cannot be traversed with a filiform, it is sometimes possible to achieve success with a well-oiled filiform passed through a panendoscope under direct vision. If the stricture can be traversed, it may then be possible to maintain dilatation of sufficient degree by periodic passage of sounds. If the stricture is too resistant to dilate readily, as is often the case, and is attended by chills and reactions, an internal urethrotomy should be done. Following this procedure it is permissible to insert a large indwelling catheter (26 or 28 F.) for a week to establish patency, and to follow this up at necessary intervals with sounds. In my experience, an internal urethrotomy in late cases is always better than an external urethrotomy, if it can be done. An external urethrotomy, with excision of the scar and reunion of the proximal and distal urethra on an indwelling catheter splint, may be followed by partial incontinence, and reformation of scar tissue requiring further dilatation with sounds. When external urethrotomy is indicated, the method of Pasteau, modified to suit the individual case, should be followed.

It is important to bear in mind the damaging effects of stricture of long standing on the upper urinary tract. Ascending pyelonephritis and hydronephrosis are sequelae which may result in death from urosepsis or uremia.

✱

JAY J. CRANE, M.D. (1921 Wilshire Boulevard, Los Angeles).—We have just listened to a well-written paper on a subject which is of great interest to all urologists, although all of us do not have the opportunity to see such a large series of cases as those just described by Doctor Beach.

The subject has been well handled, and the paper when published will command the attention of all surgeons; for

nowhere in our present-day texts or even in our current literature, is there such a complete description of this subject.

Having cared for only a very small number of such patients in comparison with the large series Doctor Beach has seen, I feel that anything I may say will not lend much weight. However, I should like to emphasize the necessity of recognizing the nature of the injury early, in order that treatment may be carried out before extravasation of urine and blood is too extensive, especially in those patients who void spontaneously after the injury.

I also wish to mention that a cystogram taken at the time of the first catheterization will be of great assistance in ruling out a ruptured bladder. If after a catheter is passed, and no rupture of the bladder is found, then many of these patients can be cared for successfully with only a retention catheter; if catheterization, however, cannot be accomplished, then one should never hesitate to drain suprapubically and explore the abdomen at the same time if necessary.

### PELVIC FLOOR AND ADJACENT VISCERA: THEIR PLASTIC SURGERY\*

By ALBERT V. PETTIT, M.D.  
San Francisco

DISCUSSION by H. A. Stephenson, M.D., San Francisco; H. N. Shaw, M.D., San Francisco; R. Glenn Craig, M.D., San Francisco; L. A. Emge, M.D., San Francisco.

A CONSIDERATION of the recent literature dealing with operations designed to correct damage to the birth canal and its supports, and to correct certain alleged pathological positions of the generative organs, leads one to believe that some of the significant factors in the statics of the female pelvic viscera are being overlooked. Certain it is that the behavior of many surgeons has been little influenced by the notable work of R. H. Paramore,<sup>1</sup> published almost twenty years ago.

#### OBJECT OF THE PAPER

The object of this paper is to outline briefly what appears to this writer to be the salient features in several useful plastic operations upon the pelvic floor and contiguous viscera. It is not intended in any sense to give a complete description of operative technique in the operations discussed, but rather to point out what should be the common feature in the various procedures designed to produce the desired results. Careful study of the various surgical methods described in textbooks and even more recent publications will show that credit for good results is often given to unimportant detail, while the significant factors go unstressed.

#### NORMAL ANATOMIC AND PHYSIOLOGIC FACTORS

In order to discuss the mechanics of repair, it is first necessary to consider the normal anatomic and physiologic factors concerned in pelvic visceral support.<sup>1</sup> It is important to understand that, except for its gaseous content, the abdominal and pelvic contents represent one visceral mass which

\* From the Department of Obstetrics and Gynecology of Stanford University School of Medicine and the Department of Public Health.

Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

is incompressible, deformable and, within limits, movable, and that this visceral mass throughout the life of an individual is continually being squeezed by its muscular walls. The pressure in this mass is subject to sudden and wide variation, and is caused by contraction of the thoracic diaphragm, the abdominal wall and pelvic floor muscles. Such pressure, originating in the upper abdomen, courses generally downward and, due to the lumbar spinal lordosis, is directed against the anterior abdominal wall a short distance above the symphysis. From here it is directed backward, and its repeated impactions produce the hollow of the sacrum from which the forces are reflected throughout the pelvic contents.

The diaphragm, which forms the pelvic floor, is composed of striated muscles with their fascial coverings, the levatores ani and the coccygei. Anteriorly, just behind the symphysis pubis, is a defect in the pelvic floor, through which escape three visceral canals to reach the surface of the body: the urethra, the vagina, and the rectum. This defect has been called the pelvic floor aperture.<sup>1</sup> The levatores ani—the only muscles which concern us in supportive operations—are bilateral muscular sheets which arise in front from the symphysis and laterally from the fascia covering the obdurator internus, and from the spine of the ischium. The fibers pass backward and medially surrounding this aperture, to insert into a median osseofibrous raphe and the terminal part of the sacrum. Below this upper sheet of the levators lies another muscular layer, a most important one in surgical repair, the puborectalis, which is inserted into the lower margin of the symphysis pubis, and completely encircles the aperture in the pelvic floor. In all of the operations designed to increase the tone of the pelvic floor, the puborectalis is the most accessible. Contraction of the fibers in the upper levator layer, the pubococcygeus, causes lateral constriction of the pelvic floor aperture, while contraction of the puborectalis layer exerts a sphincter-like squeeze of the aperture from behind the rectum forward toward the pubic bone.

#### VITAL STRUCTURES IN VISCERAL SUPPORT

There is ever recurring discussion among surgeons concerning the importance of the fascia and condensations of visceral connective tissue in pelvic visceral support; but it seems reasonable to agree with Paramore that the vital structure in preventing visceral protrusion through the pelvic aperture is the living tonic, striated muscle disposed about this aperture, and resisting downward thrusts.

The condensations of the visceral connective tissue stretch when the pelvic floor becomes inefficient, because of the inability of the musculature to withstand the pressures. The muscular floor depends, it is true, upon its connections, that is, the aponeuroses and bones. Without these rigid attachments the muscles would be useless. However, the changes which cause prolapse lie in the muscles and not in the connective tissue, which is greatly thickened in such cases.

#### THE PELVIC FASCIA

The pelvic fascia, about which there has been so much confusion in the past, is now known to be similar to fascias elsewhere in the body. It simply forms sheaths for muscles and has no direct connections with any pelvic viscera. It is this parietal pelvic fascia, together with the periosteum of the bones, which forms the real limits of the pelvic cavity, just as the transversalis fascia limits the abdominal cavity.

#### FASCIA ENDOPELVINA

The intricate layers of the so-called fascia endopelvina, which were thought to form ligaments supporting pelvic viscera (such as the true ligaments of the bladder, anterior and lateral, Mackenrodt's ligament running laterally from the upper part of the vagina and the cervix, and the sacrouterine ligaments) are simply condensations in the visceral connective tissue. While it is true that some of these thickenings contain smooth muscle fibers, their only rôle in influencing the position of the pelvic viscera is in virtue of the space they occupy and, because of their incompressibility, they are a part of the pelvic contents. These connective tissue thickenings are not present at birth, but are the later result of tensions set up in the loose, connective tissue which fills in the space between the limits of the pelvic cavity and its contained viscera.<sup>1</sup>

#### MENGERT'S CADAVER STUDIES

Recent experimental work upon cadavers by Mengert,<sup>2</sup> in which he found the uteri were easily pulled down into the position of prolapse only after section of the dense connective tissue in the base of the broad ligaments and upper paravaginal regions, was thought to prove that the muscular pelvic diaphragm plays no important rôle in pelvic visceral support. There are several factors in these experiments which make it inapplicable to conditions in the living, such as the opened abdomen, the pulling downward on the uterus from below and the loss of contractibility of the muscles. What seems to have been proved is that section of certain connective tissue structures allows the uterus to be pulled down easily when the pelvic diaphragm is unable to contract.

A disturbance in the nerve supply to the levators in infancy results in uterine prolapse soon after the activity of crying raises the intrapelvic pressure.

#### RÔLE OF THE UNDAMAGED STRIATED MUSCLE

It seems obvious that undamaged striated muscle is the only tissue in the body which can continuously respond successfully in time and in degree so as to maintain a physiologic equilibrium of the pelvic viscera in the face of downward thrusts produced from above by the sudden contraction of striated muscles. With failure of the muscle, pelvic viscera begin to descend through the pelvic aperture in spite of fascia and greatly thickened connective tissue, and this generally occurs at a time of life when the pressure in the visceral mass is reduced. This reduction in abdominopelvic pressures is caused by atrophy of the muscular walls.



## THE SMOOTH MUSCLE LIGAMENTS

The various smooth muscle ligaments of the uterus have been by some assigned a rôle in pelvic support, and have been used by surgeons of the past in vain attempts to cure uterine descent by their shortening. Although these are now generally considered useless procedures for prolapse, they are used in suspension operations on the uterus in attempts to cause anteversion of the organ. Studies on the cadaver, observations during surgical operations with the peritoneal cavity open, even bimanual examination of the uterus with the abdomen closed—all have a tendency to lead us into erroneous conclusions regarding the uterus. The rigidity of the uterus is due to the tonic contraction of its muscular walls; but to our tactile sense it suggests weight and immobility and, in contrast to the practically impalpable surrounding viscera, it seems isolated. In retroversion the greater ease of palpation intensifies this impression and strongly suggests abnormality, especially as we recall idealized anatomical illustrations of the proper uterine position.

## POSITION PECULIARITIES OF THE UTERUS

It is well to remember that the uterus is completely surrounded by an incompressible medium and that its position is largely determined by changes in the volume of neighboring viscera such as the bladder and rectum, and by the disposition of small intestines as caused by the thrusts of increased pressures coming down from above. In most women the pressures from above tend to press the uterus forward and downward upon the bladder, and the higher the intrapelvic pressure the greater the uterine immobility. Orthopedic factors which change the direction of the downward thrusts may distribute the viscera differently so that small intestinal loops lie anterior to the uterus. No amount of ligamentary shortening will change permanently the position of the uterus if the postoperative position is resisted by pressures initiated by striated muscles. Suspensions of the cervical and vaginal stumps, after partial and complete hysterectomy, are useless gestures for the same reason—that is, that smooth muscle cannot long withstand forces generated by striated muscles.

INDICATIONS FOR OPERATIONS TO CHANGE  
UTERUS POSITION

Fortunately, indications for operations designed to change positions of the uterus are disappearing, as we better interpret physical findings and symptoms. A high percentage of the backaches in women are orthopedic problems, even when appearing only in association with the menses. Chamberlain, at Temple University, seems to have shown an increased mobility of the pelvic articulations during menstruation, similar (except in degree) to that occurring during pregnancy.

The weight of the uterus is almost, if not completely nullified by the pressure and incompressibility of its surrounding medium, and can be considered as floating in this medium unless it is adherent to immovable structures by inflammatory or malignant change.

The lower the abdominopelvic pressure the more movable becomes the uterus, so that hypermotility and retroversion are found most often in asthenic individuals. This low pressure is probably the explanation of the engorged veins so often described as caused by retroversion. The circulation of the abdomen and pelvis is markedly influenced by the abdominopelvic pressure, and rapid emptying of the veins only occurs when normally high pressures are maintained. The sensation of weight in the pelvis complained of by many patients is not due to a heavy or displaced uterus, but is the patient's interpretation of symptoms arising from distended vein walls.

## PLASTIC OPERATIONS UPON THE CERVIX

Plastic operations upon the cervix, whether for repair of lacerations or for the removal of infected glandular structures, have become markedly simplified since Sturmdorf described his tracheloplasty in 1919. This operation supplanted many of the earlier procedures, because it removed pathology with a minimum of disturbance in physiological function. However, the conception that the Sturmdorf flaps of mucous membrane, when inverted into the cervical excavation, reproduce a normal relationship between vaginal vault and cervix, is erroneous. If the flaps stay as originally sutured, the cervix is pushed out of the vagina, thereby flattening the vaginal vault. Bilateral scars result, which are often mistakenly diagnosed as lacerations when only palpated. Conization of the cervix with the endotherm, using the Hyams tip, removes the pathology as effectively as the Sturmdorf enucleation, and gives a much better plastic result. If done quickly there is very little destruction of tissue, as is the case in cauterization and, therefore, little or no slough or secondary stenosis.

Just as the Sturmdorf technique could be applied at a higher level as an amputation of the cervix, so the endotherm can be used with a straight blade in cervical amputation. Control of the bleeding should be by deep suture. Whether the suturing of loosened mucous membrane flaps in the excavation is necessary or even advisable, may be questioned.

Routine inspection of the vaginal vault eight to ten days after the operation will often show the flaps loosened and hanging loosely in the upper vagina. Some of us are of the opinion that healing of the excavation by granulation and epithelization, such as occurs in conization, will give better plastic results and more nearly preserve the normal appearance of the vagino-uterine junction.

## PROCIDENTIA

Procidentia can be considered as a hernia of the uterus through the pelvic floor aperture, and represents a pathologic equilibrium established with the descent and dilatation of the aperture as contrasted with the physiologic equilibrium which exists when the pelvic floor is competent. It is always accompanied in its descent by varying amounts of bladder and rectal wall. Surgical cure in procidentia depends upon reduction of the hernia and restoring tone to the damaged levator

fibers. Reduction of the hernia consists, in the case of bladder and rectum, in dissecting these structures free from uterine and vaginal attachments; and, in the case of the uterus in its removal, interposition, reposition or amputation of the swollen cervix. The method of opening the vaginal wall is of little consequence, as long as adequate exposure is obtained; and the shape of the denudation of the vaginal wall, if any, is also unimportant, as long as snug closure can be made.

Interposition of the uterus below the bladder is an effective method of treating prolapse, and except for the fact of retention of a potentially dangerous organ, and a slight outward bowing effect upon the ureters, can be considered a useful operation. Those who advocate interposition for prolapse make as one necessary condition in its use, that the uterus must not be atrophic. Now the uterus will later become atrophic, but recurrences after this operation are very few, so that, except as a temporary feature, the good result must be due to some detail of the operation other than that produced by the position or size of the body of the uterus itself. It must be understood that no treatment of prolapse or cystocele can be considered complete until the levator muscles have been restored in tone.

#### OPERATIONS FOR THE RESTORATION OF TONE

Operations for the restoration in tone of the damaged muscular mechanism for closure of the pelvic floor aperture are not anatomical restorations in any sense. The operation is called perineorrhaphy, although the surgery in the perineum is only incidental to, and not at all a necessary part of the surgery of the pelvic floor. The perineal body, about which so much has been made in the literature of the past, lies below the pelvic floor and contains the intrinsic closure mechanism for the rectum and vagina. Complete rupture or incision of the perineal body in the absence of damage to the levators contributes nothing to the production of prolapse.

All methods of increasing the efficiency of the levator muscles consist in pulling bundles of their fibers (mainly in the puborectales layer) out of their usual course and suturing them together in the midline between the vagina and the rectum. This converts a damaged and elongated U-shaped muscle into an approximate figure-of-eight, thus in effect shortening the muscle and thereby increasing its tone, and enabling it once more to close effectively the pelvic floor aperture.

#### OPERATIVE TECHNIQUE OF SOMERS

The writer would like to call attention to an operation for repair of the levator muscles first described by Dr. George B. Somers in 1903.<sup>8</sup> The special point in technique as outlined by him concerned the suturing of the muscle bundles. After a high, triangular denudation of the posterior vaginal mucosa, the levator ani bundles are approximated by a layer of continuous silkworm gut sutures. The sutures are inserted through the vaginal mucous membrane above the apex of the denudation and are continued as mattress sutures,

closing the wound longitudinally and emerging through the skin of the perineum. The number of sutures is determined by the depth of the wound, the first being passed along its deepest part. After the mattress suture has transversed the length of the wound to emerge through the skin it is pulled taut, and this brings the tissues in the sides of the wound into contact. Each succeeding suture is placed more superficially until the entire wound is closed. The projecting ends of the silkworm sutures are left long and protected by a lead shot.

This method of perineorrhaphy closure holds the muscle and connective tissue firmly in the midline between the vagina and rectum, with little or no strangulating effect; is not as painful as usual methods of suturing, and produces no palpable transverse ridge in the reconstructed vagina. Healing is uniformly good due to the tolerance of tissues for silkworm gut and the absence of strangulation. Swelling can occur, the tissue sliding along the sutures, none of them being tied; and if infection of the wound occurs, the sutures will be effective drains while still splinting the wound edges. We have used flexible steel sutures for demonstration, and although the postoperative results were very good, the difficulties in insertion and removal are greater than silkworm gut.

#### ESSENTIAL ELEMENTS IN VISCERAL DESCENT OPERATIONS

The essential elements, therefore, in operations designed to correct visceral descent are:

1. Replacement of the herniated structures after dissection has sufficiently mobilized them.
2. Perineorrhaphy to reestablish effective closure of the pelvic floor aperture. This is done by suturing the two arms of the levators ani, with their fascial coverings, together between the rectum and the vagina.
3. The use of condensations of visceral connective tissues about the bladder and cervix uteri, the sacro-uterine, the lateral parametrial and pubocervical thickenings. These structures give immediate, although temporary, postoperative immobilization to the replaced structures and allow a firmer union to occur in the myorrhaphy.
4. When small intestinal loops accompany the bladder or rectum through the relaxed aperture, the condition is called enterocele; and cure of this condition requires, in addition to the extensive mobilization of the herniated viscera, the removal of the peritoneal sac and closure of the gap created, using the connective tissue structures previously referred to.

Recurrences in the large enterocele after operation will occur more frequently than in any other repair, because the muscular defect is the greatest. It may be necessary to use partial or complete colectomy to cure the condition. This obliteration of the vagina can be done very simply after recurrence has occurred, and should be reserved for the treatment of recurrences or in large prolapse with enterocele in patients considered to be poor surgical risks.

## COMMENT

The controversy, then, between those who believe the connective tissue or fascia the most important supporting structure, and the adherents to the theory that muscle is the real support, can be reconciled at least as regards the utility of these structures in surgery. It will be noted that the excellent operations designed for prolapse by Fothergill, Neel, Rawls, and many others, always include a posterior colporrhaphy. It seems to this writer that, although he is thoroughly convinced by the researches of Paramore, that the visceral connective tissue (the uterine, vesical and paravaginal ligaments) is of no value in determining the position or contributing to the support of pelvic viscera normally, except as it is a part of the incompressible visceral mass and not a part of the pelvic floor, still it can play an indispensable part in reconstructive operations. He believes also that many plastic operations would fail but for the temporary protection given by use of these thickenings of visceral connective tissue to the healing myorrhaphy.

2000 Van Ness Avenue.

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## DISCUSSION

H. A. STEPHENSON, M. D. (490 Post Street, San Francisco).—Doctor Pettit sets forth clearly and fully the value of certain pelvic structures in plastic surgery of the pelvic floor and contiguous viscera.

His theory of the causation of pelvic herniae is interesting and, to me, logical. If generally accepted, it should obviate the unjustifiable employment of certain operations involving the various pelvic ligaments for uterine malpositions. Hospital records already show that the operation of uterine suspension is now less frequently done than a few years ago.

All obstetricians will agree with the treatment of the cervix as described. Conization is the best method for patients still in the child-bearing age. Much obstetrical grief has resulted after the repairs and amputations formerly done by ambitious surgeons. In most instances this was due to the sacrifice of too much cervical tissue.

The careful reading of this paper by surgeons, obstetricians, and gynecologists should result in better plastic surgery of the pelvic floor and, therefore, better results for the patient requiring such surgery.

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H. N. SHAW, M. D. (901 Pacific Mutual Building, San Francisco).—Doctor Pettit has explained simply and clearly the relations and functions of the supporting structures of the pelvis. In many papers on this subject the descriptions of the pelvic fascias are so complicated that the reader is left hopelessly confused.

I know of no operation in which there are more variations of technique than in repair of the perineum, yet, thanks to an excellent blood supply, the end-results are nearly identical. One man stresses the importance of a "butterfly incision," the next uses a wedge shape, another employs silkworm gut with lead shot for approximation, while his associate regards them as relics of barbarism and uses buried catgut.

In the treatment of lacerated cervixes we prefer radial cauterization in general to the various trachelorrhaphies. I have seen end-results of cervical repairs, done by excellent men, that looked like starfish. A cautery takes about

a minute or two, and about twenty-four hours' hospitalization, while a careful cervical repair often takes a half-hour and keeps the patient in the hospital ten days.

One of the main reasons for repairing the cervix is to prevent cancer. A very early cancer would be destroyed by adequate cautery, while a very fine-looking repair might spread the malignancy like wild fire.

✱

R. GLENN CRAIG, M. D. (490 Post Street, San Francisco).—The indications for operations advocated to correct anatomical abnormalities of the uterus are steadily declining. As Doctor Pettit has pointed out, the adjacent uterine structures are the "guy-ropes," but the position of the uterus is maintained by the pressure of the soft, mouldable mass above. This we need not discuss. You might wonder why anyone would wish to talk of the anatomical structures of the pelvic floor, since they have been well known and well recognized for several decades. The present paper is based on anatomical concepts and operative procedures emphasized two or three decades ago. If one is interested enough to watch the various procedures carried out in the operating room, the answer will be obvious: the overabundance of tissue available for suturing deludes the operator into forgetting the importance of the restoration of the anatomical structures to their former normal position. While no operation is easier to do, none in gynecology is so frequently done so badly. For this reason Doctor Pettit is to be commended for so clearly emphasizing the necessity of fundamental anatomical and physiologic knowledge. I agree with the principles outlined by him, and hope we all shall have a better anatomical conception before our next attempt, of what we are trying to accomplish.

✱

L. A. EMGE, M. D. (2000 Van Ness Avenue, San Francisco).—Doctor Pettit's very frank statement of his own ideas about the mechanism of pelvic support deserves serious attention; so many statements of previous writers, giving undue credit to the pelvic fascia, have gone unchallenged and are automatically repeated in reviews of the subject. It is, therefore, refreshing to find someone who has enough courage to challenge established notions. I fully agree with Doctor Pettit that the pelvic diaphragm as a whole must depend upon functioning muscle fibers. A fascial membrane devoid of these fibers would have to possess a tremendous tensile strength and unusual thickness to withstand the abdominal pressure of an active individual. Wherever the musculature of the diaphragm has been weakened, pressure ultimately will produce a pelvic hernia. It may be argued that in old age this musculature atrophies, and that prolapse is not the usual result. However, with advanced age the pelvic diaphragm contracts and thickens, if not previously weakened, and if one realizes that physical activity is also decreased during that period, one can readily understand nature's way of regulating the supporting mechanism of the pelvis to prevent herniation.

Doctor Pettit did not discuss the work done at Stanford by Doctor Blaisdell in 1917, which includes both experimental and comparative anatomical studies. Blaisdell fully realized the importance of living muscles, and demonstrated their presence and response to functional changes in various animals and the different ages in man. Blaisdell pointed out that the basal ligaments were not individual components in the true sense of ligaments, but that they represent interchangeable groups of musculo-elastic structures to which he gave the name "suspensorium fibro-elasticum." Paramore's splendid contribution is considerably broader in its deductions than Blaisdell's, but it in no way detracts from Blaisdell's conclusions.

As far as the application of this knowledge to pelvic repairs is concerned, it perhaps is not out of place to say that any extensive repair would include muscle tissue either purposely or accidentally. Unfortunately, the very best of dissection and the strictest adherence to principles of plastic surgery will not always yield the desired end-result. The patient is relieved for some months, but herniation recurs because the supporting diaphragm has lost its contractility. In such instances there remains nothing to do except to resort to one of the operations which obliterates the vagina.



## IMMUNOTRANSFUSION: ITS USE IN THE TREATMENT OF COMMUNICABLE DISEASES\*

By PAUL M. HAMILTON, M.D.  
Alhambra

Discussion by Albert G. Bower, M.D., Hollywood;  
C. M. Hyland, M.D., Los Angeles; Hyman I. Vener,  
M.D., Los Angeles.

IMMUNOTRANSFUSION may be considered to be the combining of two well-proved therapeutic procedures, namely, transfusion and serum therapy. Theoretically, it would seem to be based upon sound logic, and practically it has fulfilled expectations in some diseases, while in others it has been less successful or has failed entirely, in some instances in the very diseases in which one might most confidently expect success. It is the purpose of this paper to outline the clinical impressions gained at the bedside in a hospital for communicable diseases, with only scant reference to purely scientific aspects or to the tremendous literature on the subject.

### APPRAISAL OF RESULTS

An exact appraisal of the results of immunotransfusion is particularly difficult because of many variables, some of which are the natural variants of disease, the possible effect of transfusion, whether immune or not, the difficulty in grading the immunity of the donor, and the effects of other concurrent therapy. Parallel cases are usually a practical impossibility, with the result that adequate scientific standards for control are seldom, if ever, achieved. Results, therefore, are hard to couch in statistical terms, even those accepted by the consensus of all observers.

From the theoretical standpoint, one should expect the results to come both from the nonspecific actions of transfusions in general, such as the general supportive effect, the stimulus to hematopoiesis, the increase in oxygen carrying capacity, and the increase in volume of the circulating medium; and from the specific actions of added antibodies. In general, its advantages over animal sera lie in its multiplicity of actions, its negligible reactions, and, in some instances, in its greater specificity; its disadvantages are lesser potency, inadequate standards of potency, and the fact that it is often not available. Usually a highly potent serum is best used as a serum, whereas a serum of low potency gives better results in the form of whole blood. Convalescent serum and convalescent whole blood are so obviously closely parallel that both will be considered together.

Inasmuch as the antitoxic and bactericidal powers of a given blood are difficult to determine, we plan dosage as it would be planned for any transfusion, upon the size and general condition of the patient and his hemoglobin and red count. The quantity of blood used averages about 100 to

150 cubic centimeters in children, and ordinarily does not exceed 300 cubic centimeters in adults. The direct method is used unless technical difficulties prevent. The indirect or citrate method has seemed to give comparable results when it has been used.

### TYPHOID FEVER

Transfusion has a definite and at times an apparently life-saving value in this disease, but a study of hospital records is not convincing that the degree of immunity of the donor is a decisive factor. These records show no critical drop in temperature, and no greater general improvement than might be expected on the basis of nonspecific results of transfusion. Reports from other communities, notably European, indicate a much greater effectiveness than has been our experience, due possibly to our lack of donors whose time interval since having the disease is not excessively long. Efforts to prepare a donor through the giving of vaccine have also been disappointing.

### MEASLES

Our experience with measles is very largely with its complications, which are not amenable to this mode of treatment. We have, however, treated occasional toxic cases by immunotransfusion with encouraging results, and serum therapy in uncomplicated cases treated in the home has many advocates. Serum used as a prophylactic, in doses of 5 to 10 cubic centimeters, has given the same excellent assistance in cutting down cross infections in the hospital that has so often been reported among private patients. Both for therapy and for prophylaxis, donors free from fever for about two weeks are most desirable, though their immunity remains high for at least six months and may be expected to maintain a level of appreciable value for a much longer time.

### MUMPS

This condition is one which we seldom have to treat. Reports indicate a definite value in preventing and treating orchitis, but our own experience is too small to be significant.

### ERYSIPELAS

Some workers have assigned immune serum or blood a definite rôle in the management of this disease, but our cases have shown no benefit other than the purely nonspecific. This failure is rather to be expected in view of the poor immunity developed by erysipelas patients, and their tendency to recurrence.

### SCARLET FEVER

This disease offers possibly the most striking opportunity for immunotransfusion in our entire experience. In the septic type, characterized by lymphangitis, adenitis, "picket fence" temperature, chills, and severe inflammation of the throat, results are always good and are often most dramatic. Commonly the temperature is normal by the following day, the rash faint or absent, the glandular swelling much reduced, and the patient subjectively improved in like proportion. Complications in these cases are extremely rare, the usual course being entirely uneventful.

\* Successes and failures of whole blood and of serum from immune donors in specific treatment of communicable diseases, as seen at the Los Angeles County Hospital.

Read before the Pediatric Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.

If treatment has been delayed until a complication has developed, such as otitis media or empyema of a sinus, results are much less gratifying, though a decided improvement may still be expected, especially in the disease process itself and sometimes in the complication as well.

Toxic scarlet fever, the type lacking evidence of extensive bacterial invasion but presenting marked prostration, sustained high temperature, heavy purplish rash, often hemorrhagic, and rapid pulse, has in our experience responded less dramatically to immunotransfusion, though these patients also are unquestionably improved by the treatment.

Simple scarlet fever, the type including the vast majority of our cases, will almost always reach a satisfactory conclusion with nothing more than symptomatic treatment; and due to press of work and lack of donors they are ordinarily not transfused. They respond very well, however, and many figures have accumulated to show a lessened incidence of complications. Other streptococcal infections, particularly of the throat and cervical glands, will also frequently respond in a manner almost specific.

In selecting donors the type and severity of their infection seems to be of relatively little importance, compared with the duration of convalescence. Those most frequently used are individuals who have had a mild attack, and who are at or near the end of the quarantine period. It would seem that the immunologic value of their blood begins to decrease quite appreciably by the end of the fourth week after defervescence. Dosage need not be large, 100 to 200 cubic centimeters being adequate for adolescents. Serum is as effective as whole blood, and is likely to be more potent than blood from a casually chosen convalescent donor, inasmuch as it is ordinarily pooled; and it is also more desirable because of its ease of administration. When using serum the dose is about a third the quantity that would have been used with whole blood. Results with either are the same, whether given by vein or intramuscularly, except for the delay in absorption using the latter route.

#### MENINGOCOCCIC MENINGITIS

This disease ordinarily does not enter into a discussion of convalescent serum therapy. However, it may be of interest to note that during the past year we have seen four patients whose organism could not be agglutinated by any commercial serum, and whose course was steadily downward under treatment with these sera. Inasmuch as they showed no evidence of septicemia it was assumed that their own blood must contain antibodies; this was verified in the laboratory, and all recovered under treatment with their own serum.

#### POLIOMYELITIS

Possibly no other disease at the present time offers such a focal point of controversy as does this one. Needless to say, final answers to the questions raised by it have not yet been forthcoming, despite vast amounts of laboratory and clinical research. Immune blood or serum for prophylaxis and treatment of this disease has received more attention than for any other condition, quite

possibly from sheer lack of any other visible approach to the problem; but results have been so conflicting and concrete evidence so scarce and difficult of appraisal that the advocates of immunotherapy have lacked conclusive support. It is difficult, nevertheless, to ignore completely the bedside impressions of able clinicians who have recorded improvement in many patients following this treatment, in instances giving every evidence of progressing unfavorably. In some of these cases improvement has been spectacular, including a critical drop in temperature and a return of reflexes to normal; this, of course, may have been due to natural vagaries of the disease, and the fact that such results do not consistently follow treatment rightly casts doubt upon its specificity. In the midst of such confusion, then, one can only offer the impressions of the men who did the work for whatever they may be worth.

Thus, Vener collected the subjective reactions of fifty consecutive patients from hospital personnel, almost all doctors or nurses, with the idea that their impressions should, presumably, be of more value than those of lay patients. Of this group, one felt worse after transfusion, three noticed no change, three felt only slightly better or were doubtful, and all the remaining forty-three considered that their transfusions had helped them decidedly. The most frequent improvement noted was in diminution or disappearance of pain, next in general sense of well-being, and next in diminution or cessation of nausea and vomiting. Objective improvement was noted in the disappearance of fever in almost all cases, and in the stopping of catheterization in seven. These patients had been ill an average of 6.6 days, with extremes of one to twenty days, and the changes noted occurred within twenty-four to thirty-six hours, regardless of previous duration of illness. Simple bed rest was not thought to be a large factor, as many of the patients had already been in bed some time without improvement; and in only four cases was any other therapy instituted at the time. These had spinal punctures, and one other patient had had a spinal puncture previously without relief.

Studying another group of patients at the same time, Meals found the same subjective improvement following the use of serum and glucose, but without transfusion; and further, that this group presented a shorter total duration of illness than did the group receiving transfusions. Thus, both observers felt that at least a subjective improvement is directly attributable to the immune bodies present in convalescent blood, but Meals holds that, except possibly in severe cases, it should be given as serum rather than whole blood. He argues that a patient having little involvement of the central nervous system may be made worse by transfusion, through an increase in the permeability of the choroid and consequent greater invasion of nerve tissue; whereas serum, lacking such effect on the choroid, permits neutralization of virus without opening new portals for its dissemination.

Such studies as these are not completely convincing, even to the enthusiast, and immunotherapy

in poliomyelitis has not been able to produce consistent statistical or scientific data in its own defense. The whole question, however, is thrown wide open again by the work of Claus Jensen during the 1934 epidemic in Denmark, in which he demonstrated what may prove to have been the unknown variable of many contradictory reports.

Jensen classified his donors on the basis of the severity of their symptoms, and tested the neutralizing power of sera from the different classes. He found the permanent paralytic, whose blood has made up the bulk of all serum used, to have the poorest neutralizing power; the patient with transient weakness, who only rarely becomes a donor, to have much higher antibody titer; and the abortive patient, who has been most carefully avoided as a donor, to have still greater neutralizing power. The potency ratios of the three groups were: paralytic, 1-1000 to 1-2000; nonparalytic, 1-80,000; abortive, 1-150,000. Thus, if Jensen's observations are correct we may have been carefully choosing the poorest available donor and creating confusion through variable potency of serum.

Jensen's work reached us too late for use during the epidemic, and we have had too few cases since then to be significant; but the present routine of the hospital, until a better one can be evolved, is to give every poliomyelitis patient immune blood or serum, preferably from an abortive donor.

#### IN CONCLUSION

Immune blood (or serum) is of great value in treatment of scarlet fever, particularly the septic type; it has some, but much less, value in treatment of measles; it is of great value in preventing and modifying measles; it is of little if any specific use in typhoid fever, erysipelas, and mumps; it may, under special circumstances, be of great value in meningococcal meningitis; its precise worth in poliomyelitis is still undetermined, but it offers the nearest approach to specific therapy now available, and is worthy of further use and investigation, particularly along the lines suggested by Jensen.

248 East Main Street.

#### DISCUSSION

ALBERT G. BOWER, M.D. (1724 North Highland, Hollywood).—Immunotransfusion is a term coined to set this procedure apart from ordinary or routine transfusions. By it we mean that, in theory, actively immunizing substances to a specific disease contained in the donor's blood are to be transmitted to the blood of the recipient for the purpose of passive immunization through the medium of transfusion. The donor is presumed to possess this active immunity by virtue of having successfully passed through an attack of the specific disease, preferably quite recently.

From the standpoint of therapy, in most diseases results are very disappointing; in some they are frequently startling. In the latter class fall simple and septic types of scarlet fever, poliomyelitis and, occasionally, severe measles and typhoid fever; though in typhoid the newer intravenous bacteriophage treatment (after Van Cleve) will, in most instances, undoubtedly supplant immunotransfusion. In the former class fall toxic scarlet fever, erysipelas, streptococcus septicemia, etc.

In those diseases in which immunotransfusion works, similar effects are not noted when merely carefully selected non-immune donors are used.

With the ultimate establishment of serum depots for pooled, specific, convalescent human sera, immunotrans-

fusion will be discarded in most instances in favor of intravenous serum therapy, because of more general availability of the latter, greater simplicity, and the establishment of standards of potency. It is to be hoped that in the future some better preservative than tricesol may be used for these sera.

Doctor Hamilton is to be congratulated for securing a serum depot for the Children's Hospital in Los Angeles.

From the standpoint of passive immunization of non-immune contacts, specific-pooled, convalescent human serum, given in adequate dosage very soon after exposure, will generally prevent the appearance of scarlet fever, measles, and mumps. In this connection its efficacy in poliomyelitis, as well as most other diseases, remains unproved.

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C. M. HYLAND, M.D. (4614 Sunset Boulevard, Los Angeles).—Of the conditions mentioned by Doctor Hamilton in which immunotransfusions have been used, I am especially interested in measles and scarlet fever.

His experience and observation in a large group of such cases gives much weight to his conclusions regarding the value of such therapeutics.

It is my feeling that his results following immunotransfusions may be duplicated with convalescent serum, provided the variables mentioned are properly evaluated in our appraisal of results, as these variables apply to convalescent serum as definitely as they do to whole blood. One of the variables, and an important one, namely, the immunity of the donor, applies less to convalescent serum than to whole blood due to the custom of pooling sera from many individuals; whereas, in an immunotransfusion, blood from only one individual is used. My experience with immune measles serum has pertained entirely to the prevention and modification of the disease. It can be conservatively stated that serum given early will prevent, and if given later will modify measles in a very high percentage of cases.

Scarlet fever convalescent serum also has two very definite uses. If given in adequate doses to contacts it will prevent the disease in a very high percentage of cases.

In a recent report from a study made in Chicago, each case of scarlet fever was responsible for 1.4 other cases. In the past season in Los Angeles multiple cases in a family were very frequent where seroprophylaxis was not used. On the other hand, in families where contacts were immunized with convalescent serum, the incidence of contact scarlet was negligible. When the disease did occur, it was definitely of a very mild sero-attenuated type.

We have observed instances where adult members of a family not immunized developed scarlet fever and immunized children of the same family escaped, although equally exposed. It would seem, therefore, that convalescent serum has a decided place in the prophylaxis of scarlet fever. Cases treated with adequate dosage show uniform improvement. In most instances this improvement is striking and dramatic.

I would like to make a brief reference to what might be considered an acceptable donor for immune whole blood or convalescent serum, and in so doing feel that the instructions given by the National Institute of Health for the production of convalescent serum are acceptable. From cases of measles the blood should be obtained not before the seventh day nor after the sixth month following the onset of the disease, whereas in scarlet fever, not before the twenty-first day nor after the sixth month following onset. In the serum prepared the past season, we did not use measles donors more than two months after the onset of the disease, and scarlet fever donors were not used more than three months from date of onset. Blood obtained in the above periods should contain a maximum of immune substances.

In concluding this discussion, I feel that both immunotransfusion and convalescent serum are of extreme value. In the contagious-disease hospital where immune donors are available, severe cases of scarlet fever may be given immunotransfusions. It will save lives and greatly reduce complications. In the home, or where transfusions for one reason or another would be difficult, convalescent serum if available may be used with equal results.

Transfusion or convalescent serum should be given early and in adequate dosage.



Doctor Hamilton's suggestion that the dose of serum should be about one-third that of whole blood is the generally accepted quantity. There is a tendency on the part of physicians to use too large a quantity of blood and too small a dose of convalescent serum. This latter tendency is probably accounted for by the fear some people have regarding the administration of serum in general.

This should not apply to a properly prepared homologous serum, which may be administered in adequate dosage, intramuscular or intravenous, and without fear, if the basic principles of such technique are observed.

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HYMAN I. VENER, M.D. (1531 Purdue Avenue, Los Angeles).—Doctor Hamilton rightly emphasizes the clinical indications and observations of immunotransfusions in communicable diseases. He has presented the subject from a practical bedside aspect as encountered in our daily hospital routine.

For years I have urged transfusions in the acute infections, often to the point of obsession. When transfusions were first instituted, normal healthy donors with high hemoglobin sufficed, but as our knowledge increased we supplemented this method with immunized donors, either from a recent convalescent or by the use of a vaccine, preferably of the autogenous type. Such a procedure is not only of definite value, but is also a worthy addition to our armamentarium of medical therapeutics. Transfusions, when administered properly, not only aid in overcoming severe toxemias and combating the resultant anemias, but very frequently are a life-saving measure.

If convalescent serum is not available, whole blood by direct method without typing, in small amounts of 15 to 20 cubic centimeters, may be given intramuscularly into one or both buttocks. Care must be taken to have a Wassermann-negative donor, unless one is certain, as may be the case when a parent is often used. This injection can be repeated at intervals as needed.

In cases of typhoid fever when we know the course of the disease will be protracted, active immunization of one or more normal, healthy donors can be started at a very early date. A vaccine of the autogenous type isolated from the patient—either from the blood stream, feces, or urine—would be preferable; but stock vaccine could be used. The dosage of vaccine can be calculated and given at four to five-day intervals for approximately two to three weeks, with a last dose being given about six to eight hours before the contemplated transfusion. Better yet would be the immunization of old, recovered cases, or those previously immunized with the triple typhoid vaccine. Such cases are expected to have a much higher antigen titer, and the results of the transfusion would be more satisfactory. Similar methods of treatment could be instituted for cases of long-drawn-out sepsis, such as streptococci and especially undulant fever.

Foshay, in a personal communication, believed that immunotransfusions might be effective in Brucella's infection. However, he felt that the donor should be a recovered patient and subjected to active vaccination rather than the use of a normal immunized donor. He calls the former type a hyperimmune status. Undoubtedly the serum or blood thus obtained has a tremendous potency and is of great therapeutic value. He firmly believes however, that it is necessary to vaccinate such a donor for at least a period of sixty days with daily injections in order to obtain good results. Foshay attributes the disappointing results obtained from normal immunized donors to the fact that they have not been immunized enough.

Some of the disappointing results of immunotransfusions can be traced to a rather hurried, active immunization with little consideration given to strains and specificities of the organism involved. Three weeks of active immunization is usually the maximum limit; often the period is much shorter. Consequently, the donor has not had sufficient time or antigen to call forth his greatest effort for high titer production.

As Foshay aptly states, "we send a new-born infant to do a man's work."

Halberg of Stockholm found that immunotransfusions gave surprisingly good results where simple whole blood had previously failed. He advocated the use of autogenous vaccine—one billion bacteria to a cubic centimeter—given at four to five-day intervals for three to four doses, and a final dose about six hours prior to the transfusion. Other

workers advocate dosages of vaccine from 50 to 250 million per cubic centimeter at weekly intervals.

On a practical basis, it has been found that the bactericidal capacity of immunized donors gradually increases during the first six hours after the vaccine injection, and remains unaltered during the following forty-eight hours.

I believe that a donor, wherever possible, should be of the same blood-grouping and is preferable if choice is available. The reason is that the agglutinin content of the recipient is increased.

Transfusions cannot be relegated to a minor surgical technique. I am convinced that it is a major procedure, and infinite care and judgment must be used in the preparation of the patient, donor, and instruments. Attention to details and good teamwork in the procedure will save time and avoid the frequent delays. Moderately small doses of 150 to 200 cubic centimeters at frequent intervals in acute communicable or infectious diseases are of more decided value than one large transfusion of 500 cubic centimeters.

Transfusions cannot be supplanted by the various drugs, serums or vaccines advocated by different biological firms, despite their extravagant claims. Much of the reluctance in the use of transfusions by the profession may be ascribed to the fact that they do not have a product all wrapped up in a fancy package, and have not been deluged with reams of literature on the subject. Instead of making use of a transfusion early in the course of the disease, proprietary drugs are given, and when they fail to perform the miracles claimed, then transfusion is instituted. Under such circumstances the patient is either semimoribund or in extremely poor condition. It is no wonder, therefore, that many physicians do not believe transfusions have any value. It only serves to cast disrepute on such therapy. Certainly, it would be best not even to attempt transfusions and thereby save time, effort, and expense.

Finally, if immune transfusions are to be of value and have a fair degree of success, we must enlist the cooperation and teamwork of the clinician at the bedside and the bacteriologist in the laboratory. The latter must know the clinical history of the case and thereby be in a position to evaluate the causative organism and its special characteristics for isolation. A thorough understanding of the problem and a willingness to work together may be the deciding factor between success and failure. With this aim achieved, proper active immunization of the donor can be instituted with the consequent possible saving of a life realized in what otherwise may be a hopeless struggle.

## PREMEDICATION FOR SURGERY\*

By JAMES C. DOYLE, M.D.  
Los Angeles

DISCUSSION by Lawrence Chaffin, M.D., Los Angeles; H. N. Shaw, M.D., Los Angeles; Mary E. Botsford, M.D., San Francisco; Elmer Belt, M.D., Los Angeles.

WHILE inhalation anesthetics are less than one hundred years old, as you all know, the use of drugs to produce sleep or stupor and facilitate surgery dates back many centuries. Soporific potions known to and used by ancient and primitive peoples included henbane, hashish, hemp, opium, and mandragora. In our own country, according to Stevenson,<sup>1</sup> certain Indian tribes used infusion of jimson weed (*Datura stramonium*). Drinking this they slept through crude operative procedures without a move or grimace.

## REVIVAL OF AN ANCIENT ART

Today we are emulating these practices by the use of "potions" in the form of a barbiturate and a hypodermic. Although great strides have been recorded in anesthesia and surgery, I believe that the adequate preoperative preparation of the pa-

\* Read before the Anesthesiology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.



tient has been in many cases grossly neglected. However, there is a more general appreciation of premedication just now than a few years ago. The day is passing when the patient is sent to surgery with only a hypodermic of morphin and atropin, and in many instances the patients themselves are asking for adequate premedication.

#### AUTHOR'S PERSONAL EXPERIENCE

Twelve years ago I had a major abdominal operation. I mention this only because I shall never forget the dread and fear that the inadequate preparation then in vogue did not alleviate. The night before I was given no sedative. A strange room, a different bed, thoughts of the morrow, and, in addition, a fire-alarm near by with the usual accompaniment of noise and confusion, were factors not conducive to slumber. Finally, at a late hour, after pacing the floor, reading, and counting sheep, I dozed off. The surgical preparation consisted of no breakfast and a hypodermic of morphin with atropin one-half hour before surgery. For some reason unknown to me the operation was postponed an hour; meanwhile the hypodermic had been given. The morphin, so far as I was concerned, served no purpose; the atropin, on the other hand, made me very dry and thirsty, for which there was no relief. As the minutes crept by, I was wide awake, anxious and apprehensive. Fear became predominant. There are countless thousands, I am sure, who feel as I do, and I bring this personal aspect to you because until very recently little or no thought has been given "adequate premedication" of the patient. Is it not surprising that even today some surgeons follow the course I have outlined?

#### PRESENT-DAY METHODS

At present there are available various preparations (drugs) that will entirely eliminate fear, worry, and even apprehension. Why are they not more generally advocated and used? Surely, it is not a question of safety. For the past six years, without any untoward reactions, I have given a barbiturate the night before, repeated it an hour before surgery, and fifteen minutes later administered a hypodermic of pantopan and scopolamin. No, it is not safety that deters premedication; it is probably no more than an old-established "habit."

#### MENTAL REACTION OF THE PATIENT

We have heard very little of the mental reactions of a patient about to have surgery; yet this factor, in fairness, cannot be overlooked. Some of us know of patients who died during induction. Recently I saw a patient wheeled into surgery for a traumatic lesion of the leg; the anesthetic was begun without even the preoperative "hypo"; the patient died after not more than half a dozen breaths of gas. What killed him? Many opinions were expressed. *I believe he died of fright.* The adrenals pour out their secretion excessively during fright—a powerful heart stimulant which may cause death.

Without adequate premedication patients are prone to shock and they require more anesthetic—

25 to 50 per cent more in some cases. The majority spend a restless preoperative night. Upon arriving in the operating room they are apprehensive, worried, or excited, all of which contribute to poor anesthesia and a miserable convalescence.

#### A WORKING PROCEDURE

"Ideal" preparation, on the other hand, should include a barbiturate, preferably nembutol, the night before. For the average patient three grains is usually sufficient. One hour before surgery, nembutol, grains four and one-half, are given, and fifteen minutes later pantopon, grain one-third, or morphin sulphate, grain one-fourth, with scopolamin (ampoule), grain 1/150, by hypodermic. Thus, the patient secures a night of rest, free from apprehension and worry; in most instances will have no recollection of the trip to surgery or, if so, only a hazy one. Frequently he has no recollection of the first few days following operation. To illustrate how complete is the amnesia, patients often ask twelve to twenty-four hours following operation when they were going to surgery.

#### USE IN SUBARACHNOID BLOCK

The premedication routine just described is urgently recommended for subarachnoid block, and in all other cases where cocain or its derivatives are used. Barbiturates detoxify cocain and its derivatives: this is shown by the work of Tatum, Knoefel, and Guttman (quoted by Downs and Eddy),<sup>2</sup> and Swanson,<sup>3</sup> and many others. (The author stressed their use in 1932.)<sup>4</sup> Several years ago a prominent urologist told me of the behavior of many of his patients during sacral and spinal analgesia: immediately following the injection of novocain they would become pale, the blood pressure would drop, the pulse become rapid and thready, the body surface would be clammy and wet; the whole picture was that of cardiovascular collapse, in other words shock. I suggested that he use a barbiturate preliminarily, and he has done so, with the result that to date the above-mentioned sequelae have been eliminated. Many patients, sensitive to cocain or its derivatives, must be fortified against these undesirable sequelae. It is my belief that many of the sudden deaths reported due to "spinal" are, as a matter of fact, novocain poisoning or sensitivity. Other sequelae and complications reported, such as extra-ocular palsies, neuritis, headaches, spinal-cord degeneration, etc., may be obviated by the use of barbiturates.

In addition to the preliminary medication already mentioned for subarachnoid block, ephedrin grain three-quarter, is given when the patient leaves the room for surgery. When given ten to fifteen minutes preceding the block, this drug, by its action on the smooth muscle, causes a moderate rise in blood pressure of 10 to 30 millimeters. Ferguson and North<sup>5</sup> experimentally established that there was no drop in blood pressure following its usage. Personally, from a clinical aspect, there is a moderate and gradual drop, depending on the level of analgesia desired and the condition of the vascular tree. In other words, on a patient

with a marked generalized arteriosclerosis, ephe-drin would have much less effect than on one with little or no sclerosis.

#### COMPOUNDS OF BARBITURIC ACID

The barbiturates first came into use in 1903 after Fischer and Mehring<sup>6</sup> synthesized "veronal." Since then many new compounds of barbituric acid have been produced and used as basal narcotics, also at times as anesthetics. Included in this group are luminal, somnifain, dial, neonal, allonal, amytal, pernocton, sodium amytal, and nembutol. Much has been written about these last two preparations, nembutol and sodium amytal; their popularity has reached the point where their use in some clinics and hospitals is almost routine. They are derivatives of barbituric acid, depressing the sensory and intellectual processes, and act by diminishing the proprioceptive faculties, thereby favoring sleep. They are sedative, antispasmodic, and hypnotic. The effect is prompt, and dreamless sleep is secured within twenty to thirty minutes following oral administration. When combined with morphin sulphate and scopolamin, body functions are altered but slightly. The blood pressure drops 10 to 30 millimeters, the pulse rate decreases and respiration is slowed. The barbiturates are broken up by the liver, and thought to be excreted through the lungs. In the instance of nembutol and sodium amytal they are not recovered in the urine.

#### ADVANTAGES OF THE BARBITURATES

I have mentioned some of the benefits afforded by this group (of which nembutol and sodium amytal are by far the most popular), benefits providing the patient with a restful night and amnesia on the day of surgery. Furthermore, they lessen the amount of anesthetic needed. Other favorable factors are the elimination of the excitement stage of the anesthetic; a favorable impression on the part of patients having had previous surgical experiences; a decrease in postoperative pulmonary complications (Hooper and Gwathmey).<sup>7</sup> Gwathmey<sup>8</sup> also stated that their preoperative use reduced by 28 per cent the use of morphin sulphate postoperatively, and by 15 per cent the incidence of vomiting as compared with the usual preliminary of morphin sulphate, which requires 82 per cent postoperative morphin and results in 60 per cent vomiting. The combination of nembutol with morphin sulphate and scopolamin has proved efficacious: the one fortifies the other and the tranquillization produced is greater than when one is given without the other. Respiratory depression is greater, but is slight as compared with the increased efficiency obtained. Clinical and experimental evidence, substantiated by personal experience, has led the author to use nembutol almost exclusively.

#### PHARMACOLOGY OF PREMEDICATION DRUGS

The pharmacology of the premedication drugs, I am sure, is well known to you all. A few points may, however, be mentioned. *Morphin and pantopon* are similar in action. They differ in that the latter consists of the isolated alkaloids of opium

in their natural proportions, the gums and resins being absent, thus assuring prompter absorption. Both act on the central nervous system, depressing its higher functions. The cardiovascular and respiratory systems are slightly depressed. The latter (pantopon) is less likely to cause nausea and vomiting, and tends to be less constipating. Both are broken up in the liver and partially destroyed there, while a smaller part is eliminated in the urine and feces. When combined with scopolamin and the barbiturates they are synergistic, and aid each other in producing more satisfactory tranquillization.

*Scopolamin and atropin* are similar in that both are alkaloids. The former occurs in various plants containing atropin and is now prepared mainly from scopol. The latter is derived from a number of plants, such as belladonna, scopol, etc. It is a respiratory stimulant. Both dilate the pupil; both suppress secretions of the salivary, sweat and mucous glands, the former being the more powerful in this respect. Because of its stability the ampoule form of scopolamin is recommended. In this form the dextro-rotatory, or stimulating alkaloids, have been removed, leaving only the levo-rotatory, or sedative alkaloids.<sup>9</sup> I have never seen a deleterious reaction from the ampoule, while unfavorable sequelae are not infrequent when the tablets are used. There is an antipathy in the minds of some men regarding the use of scopolamin, and rightly so. An elder colleague informed me of a death due to 1/75 grain (tablet) many years ago. It is needless to say he never used it again, but this was before the time of the ampoule; besides, the need for so large a dose rarely, if ever, arises.

I have previously stated my usual recommendations for preoperative drugs. I may go so far as to say they are almost routine. There are, of course, reservations as to age, weight, general condition, and to some extent the type of anesthetic, but for subarachnoid block, nitrous oxid, oxygen and ether I follow the outline above. Exceptions relate to avertin and evipal and children.

Because *avertin* (tribrom ethanol) is a powerful respiratory depressant, the preliminary medication should be somewhat less. The evening before the usual nembutol, grains three, is recommended (except in the aged and cachectic when one and one-half grains are sufficient. One hour before surgery nembutol, grains three, is given, and it is followed fifteen minutes later by a hypodermic of morphin sulphate, grain one-quarter or one-sixth, and atropin sulphate, grain 1/150. The avertin is then instilled rectally about twenty to thirty minutes before surgery. No ill effects have been noted with the above method, nor has respiratory embarrassment been encountered.

In cases where evipal is to be used, the question of premedication depends upon whether or not the patient is hospitalized and also upon the operative procedure employed. *For out-patients premedication is not recommended.* For in-patients morphin sulphate or pantopon with scopolamin will suffice, and to some extent lengthen the anesthesia; post-

operative comfort, too, will be assured. From evipal alone patients generally recover rapidly with no untoward reaction. It is only when large doses of a barbiturate are used that the reaction is delayed. In itself the drug is a cardiovascular, respiratory depressant; and the addition of nembutol or amytal increases this action unduly. It is a splendid anesthetic for operations of short duration.

#### SURGICAL PREMEDICATION FOR CHILDREN AND INFANTS

Of late some progress has been made in preparing the adolescent and adult for surgery. Children and infants have been woefully neglected. I wonder how many of us would be willing to undergo surgery with no premedication whatsoever? I feel quite sure of the answer! We know that infants and children tolerate medication. Jarman<sup>10</sup> has advocated and used nembutol in children successfully and without a failure in over two hundred cases by rectal administration. Leech,<sup>11</sup> in a still larger series of cases, recommends morphin, sulphate and scopolamin from two years on, and has used hyoscin, grain 1/1200 or 1/900, in infants with pyloric stenosis. His schedule begins at one year, with morphin sulphate grain 1/40, hyoscin grain 1/600, forty-five minutes before surgery, and proceeds up to twelve years, with morphin sulphate grain 1/12, hyoscin grain 1/300.

As with adults, we pay no heed to the psychic effects of surgery on these children, yet we know that the child is afraid of a hospital and of an operating room. Should they not be permitted to face the ordeal of a surgical experience with the same tranquillity as their elders? The induction is usually associated with crying and exhibitions of physical prowess, and undoubtedly a sequel to this terrifying experience is manifested by their fear during future contacts with the medical and nursing professions. This fact is substantiated by reports from numerous children's clinics, nurses, and social workers.

How, then, shall we aid these children? The answer is quite simple: nembutol plus atropin for the infants, with the addition of morphin in older children. How much shall we give them? No routine will apply here because of the prevalent variations in age, weight, and general condition. However, for a child of roundly four years, grain one of nembutol the night before and grains one and one-half one hour before surgery. If not asleep in thirty minutes, another grain may be instilled in the rectum. Subsequently a hypodermic of atropin, grain 1/450, forty-five minutes before surgery. In older or younger children, the doses will vary correspondingly.

I have seen no untoward reactions from this treatment, and the children were sleepy or asleep when they arrived in surgery. The induction was smooth and quiet; the anesthetic dosage was appreciably lessened. The children, I feel sure, have had no visions of terror or fright, no memory of the mask or ether, and their future medical care will be simplified with better and happier coöperation.

#### COMPLICATIONS

Complications, sequelae, or untoward reactions are infrequent, but do occur. This fact necessitates careful watching on the part of the anesthetist and nursing staff. As an example, occasionally a patient having had a preliminary barbiturate may get out of bed on the first or second day postoperatively. Although the incidence of this somnambulism is low, and more of a rarity with nembutol than sodium amytal, it should be guarded against by side boards routinely. It is noteworthy that none of these patients had to be reoperated for hernias or eviscerations. Some few patients do not react favorably to the barbiturates and are hyperactive postoperatively. These need closer observation on the part of the nursing staff. Morphin sulphate or pantopon usually controls them. Cyanosis of lips, associated with a cardiorespiratory depression, is usually of brief duration. Carbon dioxide or carbogen inhalations twice daily or three times a day may serve to prevent lung complications, and should be used routinely when ether has been given for a long operation. Rarely postoperative narcosis lasts several days, but causes no untoward result.

#### IN CONCLUSION

In an experience of six years there have been no fatalities or unfavorable sequelae from "adequate premedication." Nembutol grains three the night before with nembutol grains four and one-half one hour before surgery and pantopon grain one-third, or morphin sulphate grain one-quarter, with scopolamin (ampoule) grain 1/150 forty-five minutes before surgery (with variations for age, weight, and general condition of the patient), have proved satisfactory for all concerned—patient, anesthetist, and surgeon.

This combination was productive of amnesia, tranquillization, and a notable absence of fear and apprehension for the patient. The anesthetist found the induction easier and the anesthetic dosage was reduced by 25 to 50 per cent. When subarachnoid block was used, the patients slept throughout and no untoward reactions or sequelae occurred. Premedication for children is humane; it is desirable from the standpoint of the family, the anesthetist and the surgeon. Last of all, adequate premedication aids convalescence by decreasing the postoperative use of morphin and materially lessening lung complications.

1930 Wiltshire Boulevard.

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## DISCUSSION

LAWRENCE CHAFFIN, M.D. (1136 West Sixth Street, Los Angeles).—The value of adequate preoperative medication cannot be overestimated. The demand for more satisfactory preoperative medication in all types of surgery has been answered during the past five years by the general use of the barbiturates. Experience has clearly proved that preoperative barbiturates, in addition to the usual morphin and scopolamin, are of definite practical value, and for the following reasons:

1. Fear is so completely eliminated that many patients do not remember having had their operation.
2. The safety of spinal anesthesia is materially increased.
3. The amount of general anesthesia required is definitely lessened.
4. All types of anesthesia are taken smoothly and without effort.

I have found the procedure outlined by Doctor Doyle to be efficient and satisfactory in all respects. I would, however, suggest caution in the dosage of barbiturates for those past sixty, and for those patients who have had a prolonged illness. It has been my experience, likewise, that not infrequently children under three years of age are rather sensitive to nembutal, and require careful dosage.

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H. N. SHAW, M.D. (901 Pacific Mutual Building, Los Angeles).—This paper emphasizes a very important point: the necessity for close cooperation between the anesthetist and the surgeon.

A careful study of the patient by the anesthetist, with suggestions as to the type of anesthetic, takes quite a load from the surgeon's mind.

Among our surgical patients, a good number had previous operations before proper attention was paid to the preoperative medication. These individuals never fail to express their appreciation of its value. As the author points out, the strain which the patient undergoes before the ordeal of surgery may be a considerable factor in a delayed convalescence.

In 1908 I was operated for an empyema. As far as I was concerned, that rib resection was the most important operation that had been performed anywhere for several years. I can never forget the trip to the operating room, through walls redolent of iodoform. A crowning humiliation was to hear one of three or four white-clad figures say, "Here's the next case, who's going to put him on the table?"

A surgeon, who has recently returned from a tour of the large eastern clinics, told me that in many of them they pay very little attention to surgical premedication. It is, however, an extremely important part of the surgical procedure, and I wish to compliment the author on his very clear presentation of the subject.

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MARY E. BOTSFORD, M.D. (807 Francisco Street, San Francisco).—This timely paper is on a subject that, for some years past, needed to be brought to the attention of the medical profession. The routine administration of morphin and atropin militates against the best results, preoperatively and postoperatively, with a large percentage of patients.

The psychologic factor is of the utmost importance in the adult patient and, as Doctor Doyle points out, doubly so in children, as the sights and sounds of transportation to, and a possible long period of waiting in, the surgery

may produce a psychic response which has been known to lead to a complex lasting for years. The addition of the barbiturates and tribromethanol to the previously known narcotics, such as the opium derivatives and scopolamin, have helped immeasurably in providing an escape from the depressing effect of fear, and in bringing the patient to the operating table in the best possible physiologic and psychologic condition.

The selection and combination of hypnotics and anesthetics must vary with the individual condition.

The use of atropin in combination with morphin was based on the tradition which still maintains, that being the physiologic antagonist of morphin, it provides a safety factor. It stimulates respiration, accelerates the heart, and increases the metabolic rate. This respiratory action is a disadvantage in modern gas anesthesia, and now that carbon dioxide is available in all well-equipped operating rooms, respiratory depression can be immediately overcome.

All of the arguments of the psychic and physiologic values of the methods advocated in this paper for inhalation anesthesia have double force as to their use with subarachnoid. Finally, the barbiturates have been proved to decrease the toxicity of the cocaine derivatives.

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ELMER BELT, M.D. (1893 Wilshire Boulevard, Los Angeles).—Dr. James Doyle is to be commended for his vigorous and pleasing style of writing, as well as the presentation of a very usable plan of surgical premedication. With the magic of the phenobarbital group of drugs at hand, there remains little excuse for permitting the occurrence of preoperative terrors and fatiguing worry. I vividly recall an old gentleman driven to seek surgical help because of severe urinary hemorrhage. Fear of his hemorrhage outweighed his fear of surgery. Entering the hospital late at night, he refused all medication and suddenly fled when an orderly came in to shave his pubes. The next day another hemorrhage occurred. He reentered the hospital, still vowing that he would not be drugged. He permitted the nurse to give him an enema and thus received nembutal by rectum. When he awakened, the papilloma, which had caused his trouble, had been removed. He is now friendly to hospitals and laughs at his former fears.

Doctor Doyle fails to mention a powerful factor in his success as an anesthetist. This is his custom of visiting and examining the patient on the day before surgery. This contact is comforting and reassuring to the patient. It gives him an opportunity to express his fears and have fear replaced by a rational understanding of the manner in which a scientific man is prepared to meet for him the problem of anesthesia.

## URETERAL CALCULI\*

By DOZIER H. GIBBS, M.D.  
Los Angeles

DISCUSSION by Burnett Wright, M.D., Los Angeles; A. A. Kutzmann, M.D., Los Angeles; Lionel P. Player, M.D., San Francisco.

AS this paper deals with the practical management of ureteral calculi, the question of etiology of urinary lithiasis will be only briefly mentioned.

## ETIOLOGY

The primary cause is unknown, and it remains for the physical chemists to solve the problem. When they discover the cause of the disturbed colloid crystalloid balance, the question will be nearer a solution. Urinary stasis; infections, local and focal; disturbances of metabolism, especially calcium; vitamin A deficiency; trauma of the kid-

\* Read before the Urology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25 to 28, 1936.





Fig. 1.—Case No. 1. Impacted stone lower ureter. Passed after enlarging ureteral meatus, and one dilatation of ureter below stone.

ney or spinal cord, and highly concentrated acid or alkaline urine are contributing causes, and should be corrected, in so far as possible, as a prophylaxis against the formation of other stones.

Primary ureteral calculi are formed in the kidney and pass into the ureter, where they may become lodged at any point, usually above a narrowing, or they may pass directly into the bladder. After being arrested in the ureter they usually increase in size, causing complete, partial, or intermittent obstruction. If a groove forms they may increase to considerable size without producing any symptoms or damage to the kidney. Unless there is free drainage of urine past the calculus, there will be some damage to the kidney, varying from slight dilatation of the renal pelvis to complete destruction from hydronephrosis or by invasion of the parenchyma by infection.

A very conservative attitude should be maintained while dealing with these apparently hopelessly destroyed kidneys, as they have remarkable regenerative powers after free urinary drainage has been established.

There have been some very large stones reported by Kretschmer, Goldman, and Bugbee. The largest in my small series was 12 by 4 centimeters in diameter.

#### DIAGNOSIS

The diagnosis can usually be made, although it is not always easy; and even when it appears obvious from the history and symptoms, a complete urologic study may be necessary and should always be done.

Pain of some variety is usually present and is typical when it radiates into the external genitalia. Microscopic blood is practically always found, with the exception of the anuria cases. There are

many conditions external to the urinary tract that may cause either hematuria or suppression. The x-ray is our greatest aid in establishing a positive diagnosis. If the ureter is entirely filled with the proper contrast media, even the non-opaque stones will usually be outlined. Intravenous urography has been a great aid, not only in establishing a diagnosis, but in determining the condition of the urinary tract above the stone. No great significance should be given to the entire absence of secreted opaque media if there has been a sudden complete block. As soon as the obstruction is removed they rapidly regain their normal function. Present-day writers, reviewing large series of cases, state that from 10 to 22 per cent cannot be demonstrated by the x-ray. A wax-tipped catheter is a great aid, and should always be used in doubtful cases.

There is a definite number of cases with typical symptoms, and a few red blood cells in the urine in which no calculus can be demonstrated. These are due to a mass of adherent crystals, which may be passed spontaneously or following the passage of a catheter. Phleboliths, calcified glands and various other opacities are readily identified and do not cause much confusion if opaque catheters are used and stereo films then made.

Air bubbles in the ureterogram are occasionally confused with non-opaque stones.

#### TREATMENT

The management of ureteral calculi should be highly individualized, and they should all be removed as speedily as all the factors warrant.



Fig. 2.—Case No. 2. Calcium oxylate stone upper right ureter. Impacted eight days. White blood cells 36,000. Constant vomiting. Five unsuccessful attempts at cystoscopic removal elsewhere. Ureterolithotomy through a lumbar incision liberated 60 cc. of purulent urine under pressure from the kidney pelvis. No sutures were placed in the ureter. No urinary drainage. Healed eight days.

Since Lewis introduced his stone dislodger there has been a continued parade of dilators, screws, bulbs, slings, crushing forceps, etc., to assist in the removal of ureteral stones. The better procedure is the use of the ordinary catheters and bougies, dilating the ureter, changing the position of the stone and, if possible, providing temporary drainage past the stone. The catheter or catheters should not be left in place too long. The enlargement of the ureteral orifices with surgical diathermy is often indicated and surprisingly large stones that have become lodged here will pass. The cystoscopic removal of calculi is ideal, and every effort should be made to relieve the patient this way when the size of the stone, the condition of the kidney, and the condition of the patient justify it. A note of warning, however, should be sounded as to the dangers of too prolonged attempts with this procedure. Conservatism must have, as its object, the welfare of the patient. From 50 to 90 per cent of ureteral stones have been reported as passing spontaneously or after some cystoscopic maneuver.

#### INDICATIONS FOR OPEN OPERATIONS

The indications for open operations are:

1. Stones obviously too large to pass.



Fig. 3.—Case No. 3. A laminated calculus in the lower ureter and a similar calculus in the hydronephrotic kidney. The ureter was large enough to permit the easy passage of the ureteral stone to the kidney pelvis.



Fig. 4.—Case No. 4. A calculus twelve centimeters by four centimeters in diameter blocking the lower ureter. Young man of twenty-one with a history of severe abdominal cramps with nausea, vomiting and diarrhea, associated with limping at irregular intervals for twelve years. Ureteral calculus had not been suspected.

2. Failure to pass, after repeated cystoscopic procedures.
3. Anuria.
4. Severe infections of the kidney.
5. Impacted stones that cannot be moved or passed.

Peacock states that often the shape, rather than the size, is the determining factor.

#### TECHNIQUE

The operative removal of an impacted stone is fairly easy, as it will usually remain stationary while the patient is being anesthetized. Any movement will practically always be toward the kidney. For stones in the upper two-thirds of the ureter a lumbar approach is used. If in the lower third the mid-line incision is preferable, although some operators prefer the Gibson incision. Adequate drainage must be provided, preferably by soft tubing, and if necessary through a stab wound in the flank. This dependant drainage is especially indicated after any type of muscle splitting approach through the lateral abdominal wall. The incision in the ureter should be large enough to permit the easy removal of the calculus in one piece, and should always be done under direct vision. Profuse hemorrhage will result if one inadvertently removes a phlebolith.

No attempt is now made to close the ureter. If the ureter is entirely free from obstruction, it will rapidly heal. In my very limited experience wounds in the lower ureter have urinary drainage more often and longer than those of the upper ureter.

Ureteral calculi discovered during early pregnancy should be promptly removed. Those found during late pregnancy should be treated more conservatively.

During the past five years I have treated fifty-one private cases of ureteral calculi that were demonstrated by x-ray. There are twelve other cases of ureteral colic relieved by one dilatation in which no calculus could be demonstrated. These, I am sure, were caused by masses of adherent crystals, as the urine in each case was loaded with crystals or amorphous phosphates. In thirty-three cases the stones were passed following conservative treatment, nine being removed by various stone removers. Following the use of a metal corkscrew, one case developed a severe hemorrhage, filling the bladder with clots which were removed by way of the urethra, when the stone was found embedded in one of the clots. Twenty-four patients passed stones after being dilated from one to nine times, four requiring the enlargement of the ureteral orifice by surgical diathermy. There were eighteen open operations. Twelve ureterotomies, with two deaths from pulmonary emboli, both occurring on the twelfth postoperative day. Six nephrectomies, with no deaths: three because of hydronephrosis of long standing, and three because of multiple abscesses resulting from prolonged retention of infected urine in the kidney pelvis. One of these was removed at the time of operation, one three weeks postoperative, and the other one two months after the stone had been removed from the ureter. I would like to cite a few illustrations and unusual cases.

#### REPORT OF CASES

##### CASE 1.—Cystine calculus in the lower right ureter.

Indian boy. Age, eighteen months. Loss of weight and attacks of vomiting and crying for past six months. Many red blood cells; no white blood cells; and no infection in the urine.

##### CASE 2.—Calcium oxylate stone in the upper right ureter.

First attack of twenty-four hours' duration. Complete anuria. Gibson incision. Postoperative pulmonary emboli (three), with recovery. Insufficient drainage resulted in huge collections of pus in the flank, which were drained on the tenth and eighteenth postoperative days. Should have been drained by a stab wound in the flank.

CASE 3.—Calcium oxylate stone in the upper right ureter. Impacted eight days. White blood count, 36,000. Constant vomiting. Five unsuccessful attempts at cystoscopic removal elsewhere. Ureterolithotomy through a lumbar incision liberated 60 cubic centimeters of purulent urine under pressure from the kidney pelvis. No sutures were placed in the ureter. No urinary drainage. Healed in eight days.

CASE 4.—Impacted stone in the lower ureter. Passed after enlarging ureteral meatus, and one dilatation of ureter below the stone.

CASE 5.—Bilateral calculi in the intramural ureter. Many attempts at removal, after enlarging the ureteral openings unsuccessfully. Both stones removed through a suprapubic cystotomy wound. Healed in ten days. Died on twelfth postoperative day. Pulmonary emboli.

CASE 6.—Bilateral multiple calculi. Right nephrolithotomy five years previously. Has passed over fifty calculi

from both sides. N. P. H., 76. Total phthalein, only trace in two hours. Both ureteral orifices were enlarged. He now passes stones with little pain. The urinary infection has not yielded to treatment.

CASE 7.—Calculi in the lower ureter. Kidney removed elsewhere eighteen months previously. Continued to have colic, with blood and pus in his urine.

CASE 8.—The two x-rays were taken six months apart, and show the rapid growth of the phosphatic ureteral stone that was pushed back into the kidney pelvis during an attempt at cystoscopic removal.

CASE 9.—(a) Shows a small stone in the pelvis that remained the same size for three years. (b) Shows the same stone enlarged, and engaged in the ureter after the patient was on a very rigid stone-dissolving diet for one month.

CASE 10.—(a) Sinus tract injected with lipiodol solution. From this a diagnosis of a tuberculous lesion of the spine was made. (b) Injected with iopax, shows its connection with the kidney pelvis, and a large stone obstructing the lower ureter. The other kidney appears normal.

CASE 11.—A laminated calculus in the lower ureter, and a similar calculus in the hydronephrotic kidney. The ureter was large enough to permit the easy passage of the ureteral stone to the kidney pelvis.

CASE 12.—A calculus, 12 by 4 centimeters in diameter, blocking the lower ureter. Young man of twenty-one, with a history of severe abdominal cramps with nausea, vomiting and diarrhea, associated with limping at irregular intervals for twelve years. Ureteral calculus had not been suspected.

#### SUMMARY

1. Ureteral calculi are formed in the kidney. The actual cause is still unknown.
2. The prophylaxis to prevent a recurrence consists in (a) removing all urinary stasis and infection; (b) keeping the urine well diluted and changing its reaction; (c) a diet rich in vitamin A; (d) in cases of calcium oxylate stone, eliminating from the diet food containing oxylates.
3. Urography and the waxed-tipped catheter are diagnostic necessities.
4. Ureteral colic may be caused by masses of adherent crystals that cannot be demonstrated.
5. Conservatism must have as its object the welfare of the patient.
6. Repeated use of the ordinary catheters and bougies is preferable to the various stone removers, and is the treatment of choice in about 70 per cent of the cases.
7. The size of the stone, the size of the ureter, the condition of the kidney and the condition of the patient must be considered in determining how long we are justified in using conservative methods.
8. Free drainage must be provided. A stab wound to provide dependant drainage is occasionally indicated.

9. It is not necessary or advisable to close the incision in the ureter.

10. A small series of sixty-three cases are analyzed.

1061 Roosevelt Building.

#### DISCUSSION

BURNETT WRIGHT, M.D. (727 West Seventh Street, Los Angeles).—There is so much that is good and so little to disagree with in Doctor Gibbs' paper that it can be considered and referred to as a safe, sensible guide to the management of ureteral calculi. In this locality, where urinary stones are so common, and open operations, especially ureterotomy, are relatively frequent, it may be well to emphasize the fact that dangerous and occasionally fatal complications sometimes follow the surgical removal of impacted ureteral calculi. The author's two deaths from pulmonary emboli, in a series of eighteen ureterotomies with a mortality of 11 per cent, while uncommonly high, illustrate the point. In more than fifty ureterotomies for stone in the past fifteen years, I have, luckily, had but one pulmonary embolus, which Doctor Gibbs and I both remember all too well, since he was the unfortunate patient, and I was the terrified surgeon! That emboli may follow inadequate drainage and retroperitoneal suppuration after ureterotomy, is a conviction now firmly implanted in my mind, and is an additional argument in favor of suturing the ureter, especially in its lower third, where drains do not function as well as through a lumbar approach to the upper ureter. A certain percentage of sutured ureterotomies will heal per primum, while there is practically always some urinary leakage in those left open; often it is profuse and prolonged, and results in peri-ureteral scarring, and predisposes to coccal infection in the kidney, with subsequent stone formation, as pointed out by Kidd a number of years ago. We recently cut down on a ureter to remove a stone impacted at the site of a previous ureterotomy, and found two inches of the ureter imbedded in a dense mass of scar tissue that bound it firmly to the surrounding structures. This must have resulted from urinary leakage, after the first operation. We feel that it is especially important to suture dilated ureters that have to be opened. It is our opinion that postoperative stricture of the ureter will occur less frequently if the ureter is carefully and properly sutured after ureterotomy. For a number of years we have opened the ureter with a cataract knife and sutured it with needles and instruments used in eye surgery in an effort to avoid trauma to the edges of the incision, and to attain better approximation and healing. We recommend periodic examinations with intravenous urography and ureteral dilations, when indicated, for all patients who have had a ureterotomy for stone, to ascertain and correct any tendency to postoperative stricture formation.

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A. A. KUTZMANN, M.D. (1930 Wilshire Boulevard, Los Angeles).—I would like to commend the author on his timely and common sense, conservative discourse on ureteral calculi, especially in the treatment outlined. In the present era of advancing urology and the bringing out of so many new mechanical ureteral-stone removers, we very often forget many good and time-tried procedures with simpler instruments. It is true that some of the new stone removers can be used to better advantage in the extreme lower ureter, but for general use through the entire course of the ureter the ureteral catheter is still the best. It is fraught with less danger in causing trauma, ureteral perforations, etc. We must exercise special care where there is suspected a pathologic ureter, resulting in obstruction, edema, brittleness, etc. The writer has enjoyed much success with calculi in the ureter, situated higher than 4 to 5 centimeters, by employing the use of several catheters, and leaving them indwelling for several days. As these catheters are being removed, the injection of either sterile olive oil or glycerin, or an equal combination of both, will tend to help a stone on its downward progress. Often the stone becomes enmeshed with the catheters and will come out with them.

I believe the figure of non-visualization, 10 to 20 per cent, is too high—5 to 10 per cent being more near the

usual run. Excellent modern x-ray equipment, and technique to bring out good tissue detail are responsible for this. The use of intravenous urography will enhance such studies still further. Occasionally with the patient in the throes of colic, or shortly thereafter, no opaque media will be excreted on the stricken side, but the kidney outline will stand out more than usual due to the apparent holding of the media in the renal parenchyma. The affected kidney is not functioning, even though there be no ureteral obstruction, as evidenced by cases with very tiny ureteral calculi, but having excruciating colic. The affected side apparently is in a type of "shock," leading to a suppression which may take from several hours to one or two days to cease; meanwhile the opposite kidney will function normally, as evidenced by a visible ureteropyelogram. This phenomenon has helped in diagnosing some cases with tiny calculi or urate stones not casting shadows in the plain x-ray plate. Further aid may occasionally be obtained from the x-ray by stereo pictures, lateral views and serial pictures.

Whenever possible a catheter should be passed up the ureter prior to operation and an x-ray exposure made. This will give the operator definite information as to the location of the calculus, and, furthermore, will keep it anchored in that location until removed.

In conclusion, I would like to stress conservatism in the management of ureteral calculi, since most of them will pass spontaneously or with aid of conservative instrumental manipulation. Doctor Gibbs has outlined very well the definite indication for the surgical removal of ureteral calculi.

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LIONEL P. PLAYER, M.D. (384 Post Street, San Francisco).—The essayist in his brief discussion of the etiology of urinary lithiasis aptly concludes with the usual phrase: "etiology not definitely known." It is generally conceded that urinary calculi are primarily renal in origin. Calculi may gravitate from the renal substance to the calyx, pelvis, the ureter and the bladder, or they may become arrested at any point along the urogenital tract, and cause symptoms in proportion to the degree of obstruction and irritation they produce.

This paper is concerned with ureteral lithiasis, its diagnosis, and treatment. On an average, 90 per cent of stones are demonstrable by x-ray and this average is somewhat increased by the intravenous or retrograde injection of a selected opaque media, which shows the comparative density between the calculus and media.

The author mentions the frequent necessity for full cystoscopic study in order intelligently to determine whether surgical or manipulative procedures are indicated. He stresses the danger of delaying surgery in favor of manipulative measures, and presents in concise form the indications for open operation. He might add to these, however, two more indications, namely, increasing hydro-nephrosis and diminishing renal function.

The various metal instruments for removing ureteral stones are dangerous, even in the hands of the most skilled urologists, and should be used only in selected cases. The simplest and best instrument for removing ureteral calculi is the ordinary ureteral catheter with its varied tip modifications. It may be left in the ureter either above or below the stone for the purpose of dilatation, and the various oils, diluted acids, etc., can be injected to facilitate the stone's expulsion.

The site of the incision in open surgery should be governed by the position of the ureteral stone, and x-ray should immediately precede the operation for obvious reasons.

In many instances I have refrained from suturing the incision in the ureter, and so far have had no reason for regret. Dependant drainage, I certainly agree, is highly important, but the drain should be close to and not in contact with the incision in the ureter.

In the after-treatment of the patient, dietary precautions and clearing up of urinary infection are important; but further investigation of the urinary tract for strictures and other abnormalities is of paramount importance.



## ACUTE METASTATIC SPINAL EPIDURAL ABSCESS

By WILLIAM J. VAN DEN BERG, M.D.  
Sacramento

DISCUSSION by Howard W. Fleming, M.D., San Francisco; Carl W. Rand, M.D., Los Angeles; F. L. Reichert, M.D., San Francisco.

**A**CUTE spinal epidural abscess, metastatic in origin, is undoubtedly more common than a review of the literature seems to indicate. There have been two cases in this vicinity within the past two months. The few papers published, describing this definite clinical entity, have endeavored to focus the attention of physicians in general on the signs and symptoms which point so clearly to an abscess in the spinal epidural space.

### ETIOLOGY

The etiology is similar to that of perinephric abscess. One can usually obtain a history of a previous infection elsewhere, usually a furuncle or subcutaneous abscess, occurring a short time before the onset of the epidural abscess. In studying the previously reported cases, it is interesting to note the high percentage with a trifling back injury in addition to a previous infection. In a few cases there is a history of a back injury without an infection history. The age incidence has been from two to fifty-five years.

### DIAGNOSIS

The patient is acutely ill, and has a moderate or high fever and hyperleukocytosis. One of the distinctive symptoms of this condition is that the patient will complain of severe root or girdle pains radiating from the back to the front of the chest, or to the front of the abdomen, or around the pelvis and down the thighs, depending upon the segmental location of the abscess. Upon examination, one finds extreme tenderness of the spinous processes over the affected area, accompanied by spasm of the adjacent back muscles. Stiffness of the neck and bilateral Kernigs are present—when the abscess is in the lumbar region the Kernigs are extreme, the neck stiffness slight.

These are early signs, and if the condition is untreated they are soon complicated by signs of cord involvement—paraplegia, sphincter disturbances, sensory loss, and, as the abscess advances up the space, an advance of the sensory loss, and paralysis will be noted.

A spinal tap is essential to confirm the diagnosis, though this admittedly increases the hazards to the patient. When the abscess is in the lumbar space, there is grave danger that the spinal needle may carry the infection from the epidural space into the subarachnoid space, and thus initiate a meningitis. However, the lumbar space is over one centimeter in depth, and is distended with pus, and one can successfully pierce this space by a careful tap without entering the subarachnoid space. In fact a routine spinal tap is apt to enter this space only and evacuate pus, and if the operator does not have an epidural space abscess in mind he is likely to make a diagnosis of purulent meningitis. Any doubt in the matter can be dispelled by a

recheck through the cistern which will show a practically normal spinal fluid.

When the abscess is in the dorsal epidural space, a block is produced early; a positive Queckenstedt is present; and the Froin syndrome will be noted—the spinal pressure will be low or quickly fall because of the block; the fluid will be yellow and will clot spontaneously owing to its greatly increased protein content.

### ANATOMY

The epidural space, according to Dandy's<sup>1</sup> study of its anatomy, is formed by the division of the dura into two halves at the foramen magnum: the inner half, running down the canal, acts as the dura proper while the outer half serves as the periosteum of the vertebrae; and in between these two layers is the epidural space. This space contains fat, connective tissue, and venous and arterial plexus. Above the seventh cervical vertebra the space is merely potential, the two layers being in contact. But from the seventh cervical vertebra downward this space has a depth varying between .5 to .75 centimeters in the upper dorsal region, narrowing slightly in the lower dorsal and upper lumbar regions, and deepening to over one centimeter in the lower lumbar and upper sacral regions. The space is present only dorsal to the nerve attachments.

### TREATMENT

There is only one successful treatment—a laminectomy—which should be done as soon as a positive diagnosis is made. And the incision should be packed wide open. In several cases reported in the literature, a second operation was necessary because of pus pocketed in the spaces just above and below the limits of the original laminectomy. Operation offers a cure even in the presence of cord involvement (paraplegia), if the latter has not been present too long. Otherwise there is some residual paralysis after recovery from the infection.

I am convinced that the use of staphylococcus antitoxin in my case, following the laminectomy, was of distinct value.

### REPORTS IN THE LITERATURE

Slaughter, Fremont-Smith, and Monro<sup>2</sup> reported one patient who recovered following a laminectomy, and in reviewing the literature found twenty-nine cases reported with six recoveries—two of the six with residual paralysis of the lower extremities.

Cathey<sup>3</sup> reported one patient who was operated on and died; but as he states there was also osteomyelitis of the spinous processes, we must conclude the abscess was by direct extension and cannot, therefore, include it in our metastatic cases.

Stanley<sup>4</sup> reported two cases with recovery. In neither was there any history of subcutaneous abscess or questionable focus preceding the epidural abscesses. In both cases, however, there was a history of a trifling back injury.

Gasul and Jaffe<sup>5</sup> reported three cases in children, with two recoveries, and in an exhaustive bibliography reviewed the entire literature, begin-

ning with the first reported case by Morgagni (1682-1771). Up to July 1, 1936, and including the two cases reported herein, there have been seventy-one cases reported in the entire literature. Twenty of these patients recovered, five of whom had some residual paralysis.

In reviewing the literature one is impressed by what seems to be two distinct eras in the diagnosis, treatment, and prognosis of these patients. The first era, from the time of Morgagni to the end of 1928, was despairing: out of thirty-six cases reported only one recovered (Pulvirenti<sup>6</sup>)—a mortality of over 97 per cent. In the second era, beginning in 1929, there is a distinct change for the better. Out of thirty-five cases reported in this second period, nineteen of the patients recovered—a mortality of 46 per cent. And this brighter new era is due chiefly to the work of such pioneers as Dandy,<sup>1</sup> Mixter,<sup>7</sup> Smith,<sup>8</sup> MacDonald,<sup>9</sup> Ely,<sup>10</sup> and others.

#### REPORT OF CASES

**CASE 1.**—The first case of epidural spinal abscess reported herein is one in which the patient had a subcutaneous abscess two weeks before his entry into the hospital. A laminectomy was done and the patient made a complete recovery. Howard W., a well-developed and nourished high school athlete, age seventeen years, was admitted to the Sacramento Hospital June 11, 1936, with an admitting diagnosis of back sprain. He stated that six days previously he fell and hurt his back slightly, but thought nothing of it at the time. The following morning he had pain in his lumbar region, which gradually increased. For the past three days the lumbar pain had been severe, with sharp, shooting pains referred down both thighs anteriorly. He had had occasional headaches, but no nausea or vomiting. His mother stated he had been very irritable, and had had a high fever for the past four days. On further questioning, he recalled having had a subcutaneous abscess of his right arm two weeks before his present illness.

The abnormal physical findings were a moderately stiff neck, extreme bilateral Kernigs, marked spasm of the lumbar muscles, and extreme tenderness to pressure over the lumbar spinous processes. At entry his temperature was 102.6; pulse, 110; respirations, 24. Urine had one plus albumen. Blood hemoglobin was 75 per cent; white blood cell count, 15,400. An x-ray of the spine was negative.

A lumbar puncture in the third interspace evacuated about two drams of thick pus. Laboratory smear of the pus showed an abundance of *Staphylococci* which, on culture, proved to be *Staphylococcus aureus*. A provisional diagnosis of acute *Staphylococcus meningitis* was made, and the case was referred to me. However, a reexamination and study of the patient made me question this diagnosis. Mentally, the patient was too alert for any meningitis of a degree revealed by the spinal needle. Furthermore, the girdle pains radiating around the pelvis and down the legs, indicating a nerve-root irritation which was definitely localized in the lumbar region strongly suggested a lumbar epidural abscess. To confirm my diagnosis, I did a cisternal tap by which I obtained a perfectly clear, normal, cerebrospinal fluid.

Operation was performed about twelve hours after entry into the hospital, and about six and one-half days after the onset of symptoms. A laminectomy of the second, third, fourth, and fifth lumbar vertebrae was done, the initial incision being just to the left of the spinous processes, freeing and retracting the periosteum and muscles outwardly to the left; then severing the spinous processes at their bases and retracting them with their attached ligaments, muscles, and outer periosteal layer of the right laminae to the right. As soon as the epidural space was opened, about a dram of thick pus was released. Culture of the pus showed *Staphylococcus aureus*. The laminae of the second, third fourth, and fifth lumbar vertebrae were removed, releasing about two drams more of thick pus, and, as there was a small collection of pus epidurally in

the upper end of the sacral canal, the first sacral spinous process and laminae were also removed. There was no osteomyelitis of the vertebral processes, nor was there any granulation tissue in the epidural space. The wound was packed wide open. On each day for five days succeeding the operation, the patient was given intramuscular injections of 10,000 units of *Staphylococcus antitoxin*. His temperature went up to 104 following the operation, gradually dropped to normal on the fourth day, and stayed about normal thereafter. On the thirty-sixth postoperative day a secondary closure was made under local anesthesia. The patient was discharged August 6, 1936, completely recovered.

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**CASE 2.**—While I was preparing to report the above case, a pathologist called my attention to another case of epidural spinal abscess which he had on the autopsy table. And while I did not see this case before autopsy, I have reviewed the case history notes and present a résumé herein. D. M., white, female, age sixteen, was injured in an automobile accident August 1, 1936, and sustained a fracture of the right ankle. Physical examination was otherwise negative, except for notched upper incisor teeth (Hutchinson). Her urine was negative; white blood cell count, 16,500; blood, Kahn and Wassermann four plus. The patient had an upper respiratory infection, and spinal anesthesia was used on August 4 in setting the fractured ankle. On the second postoperative day she began to run a daily septic temperature, with its maximum between 101.6 and 102.6 degrees. On the fifth postoperative day she began to complain of severe girdle pains, radiating to the front of the lower chest and upper abdomen, and repeated examinations of the chest and abdomen failed to account for these pains. On the eighth postoperative day she insisted on sitting up in a wheel chair, and a few minutes later complained of numbness and weakness of her legs, which later in the day developed into a complete paralysis and sensory loss below the costal margin. White blood cell count was 57,400. This sensory loss and paralysis gradually ascended. The patient died within twenty-four hours of the onset of the paralysis. Autopsy showed an abscess of the entire epidural space from the foramen magnum downward into the sacrum, accompanied by cord-softening. Culture of the pus showed an abundance of *Staphylococcus aureus*.

Medico-Dental Building.

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#### DISCUSSION

HOWARD W. FLEMING, M.D. (384 Post Street, San Francisco).—Doctor Van Den Berg has emphasized the similarity of acute epidural abscess syndrome to that of perinephritic abscess. As regards the etiology the comparison is most apt, and properly stresses the relationship of local trauma and staphylococcus infection. Only too frequently the chief attention is focused on the site of primary infection or to the region of the referred pain,

until far-advanced cord symptoms make the diagnosis. In a recent case, paraplegia was considered an hysterical manifestation before proper surgical treatment was instituted.

The necessity of a thorough back examination in cases of adults complaining of thoracic and abdominal pain, is fully as real as in the child suspected of Pott's disease. Local tenderness to pressure or pounding over a spinous process is often a helpful diagnostic sign, and may be found several hours before the onset of cord symptoms. The following record of an unusual case illustrates this point.

A middle-aged man, with a moderately severe diabetes, had been operated on for a right mastoiditis. The post-operative course was difficult and interrupted by several minor complications. Several weeks after the operation the patient began to complain of pain, weakness and numbness of the left arm and hand. Early examination suggested the possibility of a stereognostic impairment, and the diagnosis of a right cerebral brain abscess suggested. The absence of stupor and signs of increased intracranial pressure made this diagnosis seem unlikely. The very definite tenderness of the cervical spine focused one's attention to that site. In a few hours it was possible to demonstrate a definite Brown-Séquard syndrome with a total block of the spinal canal. Operation revealed a very large epidural abscess in the cervical region.

The necessity for immediate operation in these cases should be emphasized. The cord signs are due to interference with circulation and a toxic softening of the cord as well as the direct pressure. If satisfactory drainage is not accomplished in the first few hours, the patient may have a permanent paraplegia. I feel a negative exploration is justified in an attempt to diagnose and treat this condition early in its course. Close observation and very frequent examination are fully as important in cases of suspected epidural abscess as in cases with a suspected surgical belly.

Doctor Van Den Berg's paper brings to our attention a syndrome that is probably far more frequent than we suspect, and one that is often diagnosed too late to allow effective treatment.

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CARL W. RAND, M.D. (523 West Sixth Street, Los Angeles).—There is now no doubt but that acute epidural abscess is a distinct clinical entity which can be diagnosed with unusual accuracy. The patients almost invariably have an infection elsewhere in the body. We have seen epidural abscesses secondary to a carbuncle of the neck, a boil of the leg, a furunculosis and osteomyelitis of the humerus.

In my experience the initial symptom has been a terrific pain in the back. This is of great intensity and is localized over the site of the abscess. The motor symptoms usually appear before the sensory. The latter, however, may become complete within a few hours after the onset. Slaughter, Fremont-Smith, and Munro have pointed out that a complete spinal block may be present before the motor and sensory symptoms have become advanced. Basing the location of the abscess on the tenderness in the back and the presence of a positive Queckenstedt's test, they have been able to drain such abscesses before severe damage to the spinal cord has occurred. This is important, for in advanced cases where damage to the cord is extensive one may expect little, if any, recovery from the symptoms. Allen and Kahn have outlined in considerable detail the structural changes which may occur in the spinal cord in such cases. Their illustrations show not only edema, but cystic areas of degeneration and necrosis. In some of their sections the cord near the posterior columns shows a honeycombed appearance. Again degeneration of the anterior horn cells is shown. These changes appear relatively early, and make it imperative that surgery should be instituted before paraplegia has appeared. Unless operation is employed early, damage to the cord will be more irreparable.

As Doctor Van Den Berg states, these cases are now being more favorably treated than heretofore. Epidural abscesses are more common than have been supposed, and in the future many more cases should be accurately diagnosed. In the past many of them presumably have been hidden under the name of "transverse myelitis."

F. L. REICHERT, M.D. (Stanford University School of Medicine, San Francisco).—The importance of recognizing and treating properly the acute spinal epidural abscesses is emphasized in Doctor Van Den Berg's paper. He has clearly and briefly summarized our knowledge of this condition and pointed out the essential diagnostic findings, indicating the important and distinctive symptom of severe root or girdle pains as an early complaint.

The findings at autopsy, in the second case, of epidural pus extending the entire length of the spinal canal, would make the pathologic condition more extensive than an abscess.

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DOCTOR VAN DEN BERG (Closing).—Early diagnosis and treatment are essential to save life and cord function. To save life after we get some degree of the permanent cord damage described in Doctor Rand's discussion is, at best, an unhappy victory. Doctor Fleming adds an interesting successful case to the growing list. Epidural abscess, as Doctor Reichert points out, is not an accurate pathologic description—empyema of the epidural space is perhaps a more exact pathologic diagnosis—but the former has been accepted by the profession and will undoubtedly remain.

## THE LURE OF MEDICAL HISTORY†

### PRACTICE AMONG THE ESKIMOS

By BRUCE H. BROWN, M.D.  
San Ysidro

IN preparing this paper, I have drawn mostly from memory. Having been in government employ,\* all my case records and reports became the property of the Government.

Practice among the Eskimos is the subject of my paper, but I shall also speak of the customs, especially those akin to disease, which will tend to give some insight into the Eskimo character.

#### ON FEEDING OF CHILDREN

To render young children strong and healthy, these savages feed them the flesh of young pups or dog's excrements mixed with their food, which sometimes causes their death. I have in mind a case of epithelioma of the lip (one of two cases of cancer seen in five years), which I had treated, of course, unsuccessfully. The native becoming discouraged, drank, either on the advice of the medicine man or some ignorant white, a mixture of dog urine and gunpowder. It killed him.

Parents who have lost several children give the surviving ones to some childless couple who, by adopting them, save them from the death to which they are doomed in their own family. This plan may work well in cases in which the parents are negligent, or too stupid to take proper care of the children, or are tuberculous; provided, the adoptive ones are not the same. But experience shows that the mortality of adopted children is not noticeably less than that of others.

#### BOILS

To cure permanently a crop of successive boils, to which these natives are not infrequently sub-

†A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

\*Editor's Note.—Dr. Bruce H. Brown was formerly a passed assistant surgeon in the United States Public Health Service.



ject, they have two methods, of singular efficacy. The core, being carefully extracted, is placed in the barrel of a gun and fired off with the load, or else it is swallowed by the patient. The second method might be considered an homeopathic treatment, while the first is decidedly allopathic.

Both, however, in this Eskimo point of view, proceed from the same idea of utterly destroying the offensive germ. In the second case the native theory is that organic matter is thoroughly destroyed by the process of digestion. Another habit, fortunately obsolete, is that of wives carefully gathering, in cups or other receptacles, the expectorations of their consumptive husbands, blood as well as pus, and swallowing it. To burn anything excreted from the body would, to them, be running the risk of terrible disaster.

#### PUBERTY

The puberty customs exclusively concern the woman. They appear to have no notion of age in puberty in males; and though they sometimes impose a new name to a male child about his twelfth year, it seems to have no reference to any organic development. In the case of a girl, the renaming generally takes place when she reaches the age of puberty. They have the idea that women at this time are particularly receptive toward all external influences; hence the principle of assimilation by contact is brought to bear, and all available objects that are possessed of qualities desirable for her are sought for and put in close proximity to her. They also believe that the discharge contains the very essence of femininity, hence the woman must avoid all contact with men; especially young men, as this would render these young men womanish and unmanly.

Of course, no young man who has a spark of ambition would willingly expose himself to blight thus the rest of an earthly career, nor would a young woman bring this misfortune upon him, and so the puberty rules are rather scrupulously observed.

I have never heard of a case of legal impurity contracted by a woman in this condition.

#### MENSTRUATION AND CHILDBIRTH

Making due allowance for honorable exceptions, it must be said that it is a notion among these people, and one that does no credit to their morality, that menstruation is a consequence of previous sexual intercourse. Thus, in certain localities, girls generally, with the full consent of parents or guardians, have intercourse, preferably with a married man, to have the first catamenia.

In other places, notably on the Yukon, it goes otherwise; and when the phenomenon first occurs to one, she receives a severe scolding as though guilty of misbehavior.

If it is in winter a small space is curtained off from the remaining space by a piece of canvas or blanket; if in summer a tent is erected for her outside. This is the retreat chamber in which the young woman eats, sleeps, works, and muses. She is conducted to it by the oldest woman in the

camp, who also administers to her a mixture of water and oil extracted by boiling some salmon heads, which have undergone partial decomposition under water, and some dried slices of white fish. The grease is put in so she will always have grease in her mouth, which is equivalent to saying that she may always have food in abundance. Solemnly presented, the beverage is swallowed with equal solemnity. Then follows a sort of lecture in which the old woman presents herself as a pattern of all womanly virtues and inquires from the girl if she will conduct herself in the same praiseworthy manner. She, naturally, answers that she will. During the month of confinement, she cannot speak to any man; not even see his face, much less touch his clothes or any object belonging to him. No evil would ensue for her, but the misfortune would be all for him. When she has to leave the place for the necessities of nature, she must do so unseen. She generally goes out late at night after the others are in bed or early in the morning before they are awake. She wears a long parkie with a long hood. This hood is called the flabby cap, which is pulled over the eyes before leaving and kept down as long as she remains out. She is not allowed to undress, but sleeps with all her clothes on, even her mittens. In these, as well as in her stockings, she has some decayed birch wood, ground to a fine powder, that her hands and feet may remain dry throughout her lifetime.

The Eskimo values this circumstance because of the frequent occasions on which they are exposed, and which, in extremely cold weather, sometimes means freezing them. In her stocking she also wears next to the skin the horny soles cut off from the porcupine's feet that, during after life, her footwear may never wear out.

Around her waist she wears a cord, tying the drawers, on which are strung the heads of femurs of the porcupine. These are sawed off from the bone and perforated for the purpose, and a supply of them are always on hand. Besides this, she wears another porcupine cord of a peculiar nature. When a porcupine is killed and its bowels are taken out, they contain the feces in small round balls distributed along the intestine, and about three or four inches apart. The guts and contents are put to dry in this condition; and when a girl "goes apart" one of these strings is given to her. She sews it inside of a belt which she wears around her waist during the period of sequestration.

These cords are to enable her to bring forth children without difficulty. The porcupine of all animals known to the natives is the one that has the easiest parturition. It lays the young without effort, just momentarily interrupting its walk to deliver itself of them, and then resuming its motions as if nothing had happened.

The porcupine cords are intended to make the women porcupine-like in this important function. The Eskimos are convinced that they possess in this a great secret, and that the women of the white race suffer so much in labor because they do not know this.



To the same end, if during a woman's sequestration someone kills a female porcupine with young, the feti are given to the woman, who slips them within her shirt and makes them slide through down to her feet to obtain the porcupine facility of delivery. She is allowed no fresh meat during the whole month, except the flesh of porcupine.

Dried meat, fish, and marrow constitute her diet.

She cannot drink from the common cup, but has her own tableware and uses no other. She sucks water through a swan's bone, which is afterward tied around her neck. It serves, together with the parkie, to acquaint others of her condition.

A menstruating woman cannot sleep with her husband, more especially if he is young. She makes her bed apart from his, and both husband and wife sleep with their blankets over their heads that the effluvia of femininity may not pass from her to him and blast his manly abilities. After the flow is over she has to wash herself from what may remain. If, however, she should happen to be very busy, as during the salmon run, it is sufficient for her to wash her head very carefully.

The menses represent to the native mind the life-giving principle; hence, it is much used as a medicine.

The substance is at times obtained by washing in a basin of water rags soiled with it. The liquid is then used as a lotion to bathe young children or even administered to them as an internal remedy. Mothers believe that by so treating their children they preserve them from disease, although the reverse frequently happens.

I remember such a case at Mouse Point, a village on the Yukon; where a healthy child was made to drink some of this medicine and the following morning it was seized with an eruptive fever which, within twenty-four hours, had covered the whole body with red patches. Soon, however, the fever subsided and the patches turned into running sores, which did not heal for nearly a year.

In these would-be medical practices the mother always obtains the soiled rags from some other woman, never using her own, the idea appearing to be that the child has already received her entire stock of vital power; so she draws on others.

Now these people are quite faithful in their observance of these superstitions and others. Of course, individuals may disregard them at times, but they will never do so openly, and take care to persuade themselves and others as well that they are observing the customs even while acting against them. One may safely say that they tend to maintain a certain standard of morality.

When the savage is brought into contact with whites and begins to disregard these superstitions, unless something can be substituted the contact with our civilization invariably proves fatal to the race. I hope at some future time to take up other customs, especially those concerning pregnancy and childbirth.

## CLINICAL NOTES AND CASE REPORTS

### MULTIPLE NEUROFIBROMATOSIS\*

By HARRY J. MAYER, M.D.

Los Angeles

AS contributions to the literature on von Recklinghausen's have multiplied, no longer is multiple neurofibromatosis, a fibroblastic diathesis with early optic nerve involvement, considered a rare disease. However, the case to be described is regarded as the earliest optic nerve involvement in neurofibromatosis to be recorded.

#### REPORT OF CASE

Mrs. Z. R., an American, aged 43, whose chief complaint, on admission to the out-patient department of Cedars of Lebanon Hospital in Los Angeles on January, 1935, was failing vision.

Past history showed treatment from 1925 to 1927 for pulmonary tuberculosis, and the surgical removal of, in 1918, the appendix; in 1926, one cystic ovary; in 1928, a small breast growth and tonsils; and in 1930, fibroid uterus and the other ovary. In May, 1931, radium was applied to a keloidal growth in the abdominal surgical scar. On August, 1931, a diagnosis of Dupuytren's contracture was considered in connection with a flexion of the right ring finger, to the flexor tendon of which adhered a firm nodule.

Important findings in the family history are: Father had a progressive loss of vision, beginning in his youth, becoming totally blind at the age of fifty-six. The paternal grandfather, who died at the age of eighty, had a growth with contraction of hand, his vision also being gradually lost.

On physical examination the patient showed a slightly generalized pigmentation of the skin. The pupil of the left eye was larger than that of the right eye, reacting more sluggishly to light. The visual acuity of the left eye was reduced to 20/200, that of the right eye to 20/50. The visual fields were found to be concentrically and markedly contracted, no fundus lesions being demonstrable. The deep reflexes were markedly exaggerated throughout. A soft subcutaneous nodule, two centimeters in diameter, was concealed at the scalp line behind the right ear; a smaller and much firmer nodule adhering to the flexor tendon of the right ring finger. Evidence of keloidal growth in abdominal surgical scar persisted.

The histopathologic diagnosis on biopsied nodule was neurofibromata.

Since 1930, laboratory findings, including blood Wassermann tests, studies on the cytology and chemistry of the blood, and three spinal fluid examinations, have been essentially negative.

Repeated roentgenologic examinations of the skull, cervical, dorsal, lumbosacral spine, thorax, shoulder, hand, gastro-intestinal and genito-urinary tracts, failed to disclose any pertinent anatomical change.

Treatment, which consisted of deep x-ray irradiation, resulted in temporary symptomatic and objective visual improvement.

#### COMMENT

Penfield's concept of von Recklinghausen's as a diffuse disease, with connective tissue proliferation in the nerve sheaths and the secondary formation of tumors, is illuminating.

Neoplastic connective or cicatricial tissue has the physical property of contracting upon ageing. The result in multiple neurofibromatosis is a pres-

\* Read at staff meeting, Cedars of Lebanon Hospital, January 20, 1936.

sure atrophy of nerve fibers, with early loss of function.

A fibroblastic diathesis is apparent in this patient's family history, dermatologic manifestations, with confirmation in the histopathology of surgical specimens. Collectively, the findings described may be regarded in the light of a constitutional predisposition in which multiple neurofibromatosis is a disease entity.

1930 Wilshire Boulevard.

### ANAPHYLAXIS FOLLOWING THE USE OF PITUITARY EXTRACT

By R. A. KOCHER, M.D.

*Carmel*

THE phenomena of protein sensitization, and of anaphylaxis resulting from a subsequent parenteral administration of the specific protein, have long been recognized. No case of anaphylactic reaction following the use of pituitary extract, so far as I am aware, has appeared in the literature. Since, therefore, I recently witnessed a severe reaction of this kind in a patient treated by hypodermic injections of United States Pharmacopeia solutions of pituitary, it seems worth while to report the experience.

#### REPORT OF CASE

B. K., a woman, aged 40, had had measles, chickenpox, and scarlet fever as a child. Infestation with *Entameba histolytica*, for a period of ten years, finally was completely cured six years ago with no demonstrable sequelae. Occasional mild attacks of influenza. Tonsillectomy in 1920. Otherwise, in good health. Physical examination revealed no pathology. Leads an active domestic life, has two children, ages four years, and five months, respectively. Both cesarean deliveries. The patient had never experienced an attack of urticaria, hay fever, asthma, or any other allergic condition. On May 18, 1936, she suffered an attack of herpes zoster, with four patches of cutaneous vesicles involving some of the endings of the lower branches of the right cervical plexus. There were no symptoms of any primary condition to account for the herpes, with the exception of fatigue as the result of a period of overactivity occasioned by the care of her two children. Encouraged by the favorable results reported in recent years in the use of pituitary extract for the treatment of herpes zoster by Sedlick in 1930,<sup>1</sup> Niles in 1932,<sup>2</sup> Somers and Pouppirt in 1935,<sup>3</sup> and by personal previous experience in two cases, I decided on its use in the present case. Following the method described by Somers and Pouppirt, this patient was given an initial injection of 0.2 cubic centimeter of posterior pituitary extract (U. S. P. ampoule, Squibb). There was no unfavorable reaction; this was followed in one hour with 0.5 cubic centimeter. There was a fleeting pallor and tremor following the injection, and considerable relief of pain. This dose was repeated in three hours, and during the following two days, injections of 0.5 cubic centimeter as pain reappeared; the intervals varied from two to four hours. By the end of the third day a total of 5 cubic centimeters of surgical pituitrin had been given, the pain had greatly subsided and the vesicles had begun to dry up.

On the sixth day, following the last injection of pituitary, and at about 4 p. m. the patient noted the appearance of four or five urticarial wheals about one-half centimeter in diameter, with intense itching, on the flexor surface of both forearms. By 8 p. m. similar scattered wheals appeared on all parts of the trunk and extremities. At five o'clock the following morning I was called and found the patient in shock, covered from head to foot with scattered

giant urticarial wheals; the largest, on the buttocks at the site of the original injections, measured 5 to 10 centimeters in diameter. There were nausea and vomiting; pulse 140, thready; blood pressure, 80/50; temperature, 97 degrees Fahrenheit. There was slight chill; patient complained of pain in the joints, intense itching, and a feeling she was going to faint. She was immediately given a hypodermic injection of epinephrin, one cubic centimeter, to which she responded within a few minutes by relief of the nausea and vomiting; improvement in pulse, rate 100, fair volume; blood pressure, 110/70. The intense itching and burning of the urticaria were not much relieved by the epinephrin. Along with soothing lotions and starch baths, injections of epinephrin, 0.5 cubic centimeter, were given at intervals of three to four hours. Giant urticarial wheals appeared in fresh crops about every six to ten hours, preceded by nausea and vomiting, ultimately involving every square inch of the body surface, not missing the vulva, rectum, scalp, palms of hands, and soles of the feet. By the end of four days the urticaria began to abate, and within twelve more hours had entirely disappeared, leaving a slight edema of the face for an additional twenty-four hours.

#### COMMENT

At the time of delivery of her last baby five months previously, this patient had received repeated injections of posterior pituitary extract for the control of uterine contraction as well as gas pains. There is no doubt that these were the sensitizing doses of pituitary. Pituitary extract contains the water-soluble principles from the fresh posterior lobes of the pituitary body of cattle. Whether any precautions are taken in the preparation of this extract to exclude water-soluble proteins or their derivatives, I do not know. In any event, it seems most probable that accompanying proteins rather than the active pituitary principle are responsible for the sensitization and subsequent anaphylactic reaction described. It has been mentioned that this patient had never before experienced an allergic reaction of any kind. Furthermore, there is nothing in her recent history, habits or behavior to lead one to suspect any other substance than pituitary extract as the offending agent.

#### SUMMARY

A woman, age forty, otherwise in good health, was treated for herpes zoster by injections of posterior pituitary extract. Six days following the last injection of pituitary, she suffered an attack of anaphylactic shock, characterized by nausea, vomiting, fall in blood pressure, rapid, thready pulse, painful joints, and generalized giant urticaria. She was treated by injections of epinephrin and after four days of intense suffering made a complete recovery. Sensitization to pituitary (probably contaminating proteins) at time of childbirth, five months previously.

P. O. Box 926,

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# BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

## PREPARATION OF CATHETERIZATION

### I. PATHOLOGY AND DIAGNOSIS

EDWARD W. BEACH, M.D. (Medico-Dental Building, Sacramento).—*Historical Notes.*—Few surgical instruments boast the hoary antiquity of the lowly urethral catheter, and perhaps no single instrument has proved a greater boon generally nor afforded suffering mankind more relief. If we could but conjure a sort of retrospective television, or borrow Eric Bell's "Televisor" and thereby slip chronologically backward into possibly the fourth dynasty, we might behold our noble predecessor, old Imhotep himself, armed with a hollow metal instrument (not historically authenticated), bending over some unfortunate Egyptian in the throes of acute urinary retention. Somewhat later we could applaud the dexterity of the Hindu medico with his metal sonde (as related by Hessler) and follow the catheter's modification and development into the era of Hippocrates. Soon we might witness the advent of the non-metallic or flexible tube among the Arabs. Successively, as the centuries rolled swiftly by, we might study with amazement the bizarre types of catheters which made their appearance notably with the development of the lithotomy operation after the time of Ambroise Paré, and marvel at the unique materials, other than base metals, which were used to fabricate these early-day catheters. Then, if the modern aseptic conscience could withstand the shock, particularly anent catheter accessories and various embellishments, we might later watch with interest the importation of rubber into Europe, and see how quickly this new substance was adapted to the old principle of catheterization.

Taken all in all, it appears logical to assume that the procedure of catheterization must have antedated the Vedāngas, and yet it begins authentically, notwithstanding, in this period. Slowly at first, progress concerned itself with refinement of these pristine instruments as to form, size, shape, and contour, as well as intrinsic composition. With the dawn of aseptic comprehension, thanks to Pasteur and Lord Lister, the improvement in technique now came quickly to the fore. As a net result, today the physician possesses a wide assortment of catheters ranging in size, shape, composition, and structural design, which is sufficient to master almost any deviatory quotient, and the operation is performed aseptically. Indeed, the urethral catheter has now become as common and almost as indispensable to the profession as the carbon radical to the benzene series.

The invention of the first urethral catheter undoubtedly hinged upon the urgent necessity for relief. Even today the catheter still renders its

greatest service, and is most useful to the general profession as an emergency agent for relief of acute urinary retention. For the urologist, however, aside from this retention phase, the urethral catheter becomes a veritable factotum in the urologic domain, so wide and diversified is its application both as to treatment and diagnosis. Considered purely from the diagnostic standpoint, the catheter comprises a sort of ridgepole which offers support for the entire ensemble and about which much of the other urologic structure is draped. In fine, the catheter constitutes a virtual "runner-up" to the cystoscope, and offers the urologist an "open sesame" to the diagnostic realm, through which medium certain priceless information is educed which would be difficult or impossible to obtain in any other way. This diagnostic information may be gleaned directly from behavior of the catheter itself (*e. g.*, with urethral strictures), or indirectly with the catheter merely an intermediary agent for consummation of a definite objective (*e. g.*, the cystogram). Some of this diagnostic information possible of acquisition by means of the urethral catheter might be tabulated as follows:

#### (1) Concerning the Urethra and Adnexa

(a) Anent the penile, bulbous, and membranous portions of the urethra: The catheter may, at the outset, detect some urethral anomaly, *e. g.*, a diverticulum, etc. Again, strictures are common about the bulb (especially the venereal type), but these accrue, likewise, in the penile portion. The position, number, type, caliber of luminal diminution, and some idea as to the extent may all be roughly ascertained with the catheter. The catheter is particularly valuable in the "straddle" injury to determine the position, extent, and degree of urethral damage. This injury most often involves the membranous portion, and is usually incomplete, *i. e.*, catheterization is possible.

(b) Anent the pars prostatica: A stricture here, which is rare, usually means tuberculosis or lues. A general decrease in caliber may mean cancer. With prostatic hypertrophy, the prostatic urethra is usually lengthened and its anatomical conformation distorted, contingent upon the portion or portions of the prostate most implicated in the growth. In the precystoscopic era, for diagnostic purposes it was customary to measure accurately the length of the posterior urethra (the distance from the external sphincter to "water," which is normally about 4 centimeters) by calibrations upon the catheter. Any increase in length of this portion of the urethra was indicative of hypertrophy, and the degree of the latter commensurate with the former. An excellent idea of the prostatic lobe or lobes most involved in the

hypertrophy may be adduced from the urethral encroachment, or hence from the type of catheter (Nélaton, Wishard and stylet, Coudé, bicoudé, overcurve, etc.) which is necessary to treat of this architectural deviation and override the given impediment. With use of the catheter and radiopaque media, prostatic urethrography and a study of bladder-neck topography are easily managed. This procedure is particularly informative before and after transurethral resection, for comparison as to tissue removed, anatomical reconstruction, end-results, etc.

(2) *Concerning the Bladder and Bladder Neck*

(a) By means of the bladder urine: A catheterized specimen is often essential for diagnosis notably with regard to identification of the offending organism and for cultural study, not to mention determinations of the pus and erythrocytic content. The presence of residual urine is easily established with the catheter. Residual urine usually means vesical neck obstruction, but may connote nerve dysfunction or be indicative of diverticulum. Foul, ammoniacal residual urine suggests stone. A metal catheter may elicit the pathognomonic "click."

(b) By means of the bladder capacity: A bladder capacity under 150 cubic centimeters denotes contracture, while an increase above 600 cubic centimeter means bladder atony. Some idea of the bladder tone can also be acquired in this procedure by the force of the return flow from the urethral catheter. Prior to the development of the roentgen ray this capacity determination had great diagnostic value in suspected bladder rupture.

(c) By means of cystography: The catheter is essential to this procedure. Valuable diagnostic aid is furnished by this maneuver, especially in obstructive lesions about the vesical orifice, *e. g.*, posterior valves in children, contracted vesical neck in the middle-aged, and true prostatism in the aged, etc. Cystography is also of value in the diagnosis of vesical tumors and diverticuli, and especially by contrast pictures in the latter. Cystography is of the greatest importance in suspected vesical injuries, to confirm the presence of bladder rupture and to indicate the location.

(d) By means of the cystometer: The catheter is necessary in this procedure, which comprises a technical method for accurately measuring the intravesical pressure, with a specially constructed manometer (usually the Rose device). Several readings are taken at specific intervals and a graph constructed to be contrasted with the normal. This is the best method, to date, for differentiation of the usual myogenic atony of the bladder contingent upon pure obstructive phenomena from that type of bladder atony dependent solely upon nerve changes. Sometimes, however, these two conditions coexist with confusion of the picture. When defective enervation is present, the cystometer may also help to distinguish which of the three nerve groups, *viz.*, pelvic, hypogastric and pudendal, is at fault. Much knowledge remains undiscovered in this field and most specifically as

to evaluation of sphincter tonus (both internal and external) in its relation to that of the detrusor.

From this brief outline, one immediately appreciates the exalted position which the ancient and lowly urethral catheter has come to assume in the sphere of modern urologic diagnosis.

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## II. TREATMENT

HENRY A. R. KREUTZMANN, M. D. (2000 Van Ness Avenue, San Francisco).—The various conditions in which catheter treatments are important are:

1. Retention due to (a) prostate abscess; (b) urethral stricture; (c) hypertrophied prostate.
2. Rupture of posterior urethra.
3. Cord injury.

There are many types and shapes of catheters. For general purposes, a No. 18F. or 20F. Robinson catheter is excellent. It is a soft rubber catheter with two eyes. The tip has a depression into which a stylet can be inserted without danger of it slipping out and perforating the urethra.

The most common catheter used in women is made of glass. There is always danger of its becoming cracked on boiling and breaking off after insertion. Another disadvantage is the fact that it will promptly fall out if not constantly held in place. The ideal catheter for women is the Furniss metal catheter. It is shaped to fit the female urethra and is self-retaining.

There are two types of retention catheters. They are the mushroom or Pezzar, and the winged or Malecot catheters. The latter are either two- or four-winged. The four-winged is the better, as there is less chance of its slipping out of the bladder. The retention catheters are used following cystostomy. They are not to be inserted through the male urethra.

In women the Malecot catheter is excellent for urethral drainage, as it produces less irritation *in situ* and its removal causes little discomfort.

### Prostatic Abscess

Acute retention following prostatic abscess is nearly always a complication of an acute gonorrheal urethritis. Although instrumentation during a gonorrheal infection is contraindicated, these cases are an exception. A small coude woven catheter has the proper stiffness, and its tip has the proper angle to ride over the bulging prostate with a minimum of trauma and pain. It should be used in preference to either a soft rubber or metal catheter.

### Urethral Stricture

Acute retention usually results from the complete closure of a strictured area following either an alcoholic or sexual debauch, or both. One may be assured that strictures in these men are severe, of long duration, and that treatment has been greatly neglected. It is inadvisable to attempt to open up the stricture with either sounds or metal catheters. There is great danger of producing false passages or of perforating the urethra.



Attempts to empty the bladder should be made with the smallest size (10F.) woven catheter with a coude tip, or the smallest sizes (4-6F.) straight olive-tipped, woven catheters. Too much instrumentation with these catheters will do real damage, therefore one should not persist too long in attempting to pass them. It is better to insert threaded filiforms to which a woven Phillips urethral catheter, size 8-10F., is attached, after successfully passing one filiform through the strictured area.

#### *Hypertrophied Prostate*

The purpose of catheters in these cases is twofold:

1. To relieve acute retention.
2. To institute drainage preparatory to operation.

The first attempts to relieve acute retention in prostatics should be made with a small size (10 to 12F.) soft rubber catheter. If unsuccessful, either a woven coude or bicoude catheter should be tried. Metal catheters are contraindicated on these patients. When all other catheters have failed, a No. 6 olive-tipped ureteral catheter will often slip by the obstruction. A ureteral catheter is also very helpful in long-standing cases of obstruction where the bladder is greatly dilated, and sudden complete emptying may result in renal hemorrhage, shock, and even death. The small lumen of a ureteral catheter assures very slow emptying of the bladder, thereby preventing any of the complications just mentioned.

Preliminary drainage of the bladder with an indwelling catheter is an essential procedure in preparing patients for prostatectomy. Some urologists use a No. 18 or 20F. soft-rubber catheter tied in the urethra. In patients with a sensitive urethra this cannot be tolerated. There is also the possibility of epididymitis developing if the vasa are not first ligated. Therefore, many surgeons perform a two-stage prostatectomy, preferring to drain the bladder suprapubically with a Pezzar catheter.

If the bladder is greatly distended, one can pass a No. 20 Malecot catheter, stretched on a straight stylet, through a trocar which has been inserted into the bladder through the space of Retzius. A silkworm gut suture through the adjacent skin is tied about the catheter, thereby preventing its accidental removal. By this method there is no leakage of urine around the catheter, and the patient need not be hospitalized. This does away with a preliminary cystostomy, but should not be attempted where the bladder capacity is less than 500 cubic centimeters, as the trocar may perforate the bowel.

#### *Rupture of Posterior Urethra*

This condition usually results from an accident. Attempts should be made to pass a No. 22 to 24F. soft-rubber catheter. If the avulsion is not severe, the catheter will pass readily. If the catheter will not pass easily, stop all manipulations, as continued efforts will only increase the tear in the urethra.

It is better to open the bladder suprapubically and pass a catheter retrograde from the internal sphincter through the meatus. A soft-rubber catheter of the same size is tied to the tip of the one in the urethra. The catheters are then pulled out of the suprapubic wound until the openings of the second one are in the bladder. The two catheters are then cut apart and the bladder is closed around a Pezzar catheter. The urethral catheter is left *in situ* for two weeks or more, depending on the amount of urethra torn.

#### *Cord Injury*

Complete bladder retention resulting from injury to the cord is usually treated by intermittent catheterization. Sooner or later cystitis will develop, followed by pyelitis or pyelonephritis.

If the physician has the courage, he will refrain from any catheterization. For some time the bladder will be greatly distended with overflow incontinence. In time, however, automatic emptying of the bladder will result and urinary infection will not complicate the primary condition.

#### *General Consideration*

Physicians should at all times regard catheterization as an important surgical procedure. It should be performed only under proper aseptic conditions such as thorough cleansing of the meatus and the use of sterile towels, gloves, instruments, and lubricant.

In prostatitis and patients with urethral stricture, some urinary antiseptic should be given for several days beforehand.

Urethral chill is a frequent complication of catheterization. It can often be aborted by the oral administration of urinary antiseptics; by giving quinin every four hours for a short time before and after treatment, and by irrigating the urethra with an antiseptic solution before passing a catheter.

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### III. CATHETERIZATION OF THE FEMALE

ADOLPH A. KUTZMANN, M. D. (1930 Wilshire Boulevard, Los Angeles).—Catheterization of the female should be a simple procedure, but so complex has it been made with awkward and unnecessary preparations that it has become almost akin to a major operation in some institutions. This complex procedure is the result of two facts, the complicated standard technique as taught in training schools for nurses and the unnecessary preparation, almost bordering on fanaticism, demanded by many physicians to avoid supposed contamination, a presumed cause of cystitis.

Catheterization of the female is and should be kept a simple procedure. The extensive use of sterile towels covering the thighs, abdomen and bed, and excessive washing of the external genitalia pubes and vestibule are not necessary. The catheter, if it is of the proper type and skillfully handled, will never come in contact with these surfaces. The use of much cleansing fluid, such as green soap, 1-1000 mercury bichlorid solution, will leave the patient in a pool of contaminated

water, as well as a collection of unclean fluid in the posterior fourchette; exception to this may be in the case after vaginal surgery or during the puerperium. The use of the male soft-rubber catheter leads to awkward and painful catheterization. Consider the fact that the female urethra is about  $1\frac{1}{2}$  inches long, semi-crescent in shape. If the long catheter is used it must be gathered in a sterile gloved hand or permitted to drag along. It should be passed about  $1\frac{1}{2}$  to 2 inches, but it will not remain in place, slipping out because of the weight of the very long portion left outside. The natural reaction, therefore, is to keep pushing in such a catheter until about 4 to 6 inches are in the bladder. This will cause a loop to be formed against the bladder wall, resulting in pain. If an irrigation or instillation is to be given by the syringe method, such a kinked or looped catheter will tend to straighten out under the pressure, thereby enhancing the pain to the point of distress, and even trauma. Should the funnel gravity method be used, the fluid would probably not enter the bladder because of the kink in the catheter. To avoid this with the long, soft-rubber catheter, it must be constantly held in the proper place with one hand, thereby handicapping the skillful carrying out of the procedure when an instillation or an irrigation is to be given. The use of female catheters, 18 to 20 French in size, either glass, metal, or woven silk, with the proper shape and contour, will easily eliminate such troubles. The use of the short, stiff female catheter is always under complete control during the act of catheterization. The end of the catheter need never be touched by instrument nor hand, but directly passed into the bladder to the proper distance and without any difficulty. Because of their shape they will usually remain in the proper position of their own accord. The use of pyrex-glass catheters, and their careful examination prior to insertion, will avoid the chance of breaking. Should it be wished to eliminate this element of the danger of breaking, the metal or silk-woven catheter may be used. I believe that the danger of glass catheters breaking has been exaggerated. But one such case has been observed by the writer, and this was due to the permitting of an inexperienced student nurse to catheterize a pregnant woman, an obvious mistake.

The simple catheterization of a female may be carried out as follows: The patient is placed flat on her back, in the lithotomy position, either on a table or the bed. If the latter, the legs are pulled up and bent outward, thereby obtaining a position similar to the lithotomy. The attendant's hands should be thoroughly washed. If right-handed, stand to the right of the patient, if in bed. With the fingers of the left hand, the labia are spread apart so as to obtain a good view of the external urinary meatus. A good light should always be available. With the right hand, and using a good soft piece of cotton, dipped in a mild mercurial solution (1-1000 solution mercuric cyanid, merthiolate, oxycyanid of mercury or any other good mercurial solution), the vestibule is cleansed, washing from above downward, each time dis-

carding the used cotton. If it is necessary to let the labia fall back in place, a piece of cotton dipped in the cleansing solution is first placed in the vestibule. Then using a stiff female catheter (glass, metal, or woven silk), the cotton is removed and, again holding the labia apart, the catheter is inserted about two inches, utilizing gentle pressure and carefully following the urethral curve. Since the female catheters are shaped, they will usually remain in place without holding, permitting the use of both hands to carry out an irrigation or instillation. Keeping the procedure of catheterizing the female simple will, therefore, be less likely to result in a bladder infection. It is the traumatizing of the urethra and bladder, with the permitting of prolonged bladder distention or the overlooking of a urinary residual that really results in cystitis. Too often the nurse or house physician is unnecessarily blamed by the attending physician because of the lack of understanding this simple procedure of catheterization. Nothing predisposes to bladder infection as much as trauma, obstruction, residual, and distention. It is well-nigh impossible to infect a normal bladder, except possibly with the gonococcus.

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*Shortage of Radium.*—The National Radium Trust was established in 1929 with a capital of \$1,250,000, contributed by the public to provide radium for the treatment of disease. The trust appointed a National Radium Commission to distribute the radium to hospitals and clinics. In the report for the year ended July 1936, just published, the Commission states that, in order to secure efficient radium service for the country it will be necessary for the present radium centers to extend their work, new centers will have to be formed, and further supplies of radium are required. At most of the centers there has been a tendency to replace the interstitial and intracavitary use of small quantities of radium by the application at a distance of large quantities of radium. This method has led to many of the centers pressing the Commission for more radium. The report records much progress at almost all the centers and high level of initiative and zeal, which will go far toward solving the grave problem of the Commission. The trend of present-day experience indicates the advantages in certain cases of cancer of combining radium and x-ray treatment. It is calculated that in this country about forty thousand persons are suffering from cancer in those accessible organs in which radium may be of value, but that only eight thousand obtain the treatment.—A. M. A. London Correspondent.

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*Elaborate Preparations Against Attacks with Poison Gas.*—Britain will soon be the first country in the world to have gas masks available for the whole of the civil population of the capital. Scientific and technical experts have worked out a difficult and new problem: how to produce a simplified and improved gas mask, which can be made by the million by mass production methods. At a factory established by the government, the output will soon be half a million masks a week, and it is proposed to make thirty million, sufficient for the whole civilian population. The components of a gas mask are a light metal container filled with activated charcoal, several pieces of wire gauze, a thick wad of absorbent cotton, some layers of muslin fabric, metal springs, and a rubber mask or face piece into which the container is fixed. The mask fits securely under the chin, over the mouth, cheeks, and eyes. A cellulose acetate window permits vision. The mask is fixed to the head by easily fitting elastic straps.—A. M. A. London Correspondent.

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Yet all experience is an arch where through  
Gleams that untraveled world whose margin fades  
Forever and forever when I move.

—Alfred Tennyson

# CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

## CALIFORNIA MEDICAL ASSOCIATION

EDWARD M. PALLETTE.....President  
HOWARD MORROW.....President-Elect  
W. W. ROBLEE.....Speaker  
MORTON R. GIBBONS.....Council Chairman  
FREDERICK C. WARNSHUIS.....Secretary-Treasurer

### THIS MONTH'S TOPICS\* ASSOCIATION ACTIVITIES

1. *Dues! Dues! Payable Before April First.*
2. *Specialty Examining Boards.*
3. *Ethics or Etiquette.*
4. *Del Monte Session, May 2-6.*
5. *Del Monte Meeting: Past Presidents Advance Reasons for Attendance.*
6. *Reduced Railroad Rates to Del Monte.*
7. *Medical Society of the State of California.*
8. *Why Insurance Premiums Are High.*
9. *North and South Golf Tournament in Del Monte.*
10. *Four Cents Per Day!*

### DEPARTMENT OF PUBLIC RELATIONS

1. *Public Education.*
2. *"They Who Said It Couldn't Happen."*
3. *Annual Reports.*

### ASSOCIATION ACTIVITIES

#### DUES! DUES! PAYABLE BEFORE APRIL FIRST

Unless your 1937 dues to your County and State Association are paid to your county secretary, this will be the last issue of this publication that you will receive while being in arrears.

The by-laws provide that members whose dues are not paid on April 1 shall be placed on the roll of delinquent members, the JOURNAL shall be discontinued, and all membership privileges and rights suspended.

Hence the query: Have you paid your 1937 dues? If not, *remit them today* to your county secretary and thereby remain in good membership standing.

These are serious days and times. Grave questions confront the profession as a whole and members individually. There are some three hundred bills before the present session of the Legislature that affect every individual practicing physician. United action and support is necessary to prevent undesirable, unwise, and harmful enactments. Your committee and officers are intensely active in guarding your personal and professional interests.

The least you can do is to remit your dues so as to benefit from this representation. Write that check today and see that it reaches your county secretary within twenty-four hours.

### SPECIALTY EXAMINING BOARDS

The latest advice from the Council on Medical Education and Hospitals is that the following examining boards in the medical specialties have been fully approved by the Council: American Board of Dermatology and Syphilology; American Board of Obstetrics and Gynecology; American Board of Orthopedic Surgery; American Board of Pediatrics; American Board of Psychiatry and Neurology; American Board of Radiology; American Board of Urology; American Board of Internal Medicine.

\* All articles listed under the caption, "This Month's Topics," have been written and sent to the Editor by the Association Secretary, Dr. Frederick C. Warnshuis.

This action was authorized by the House of Delegates of the American Medical Association, which invested control of special examining boards and the formulation of standards to be met in this Council.

### ETHICS OR ETIQUETTE

It is interesting to think of the relations between ethics and etiquette. The most satisfactory definition is: "The science of human duty." Etiquette is defined as usages of professional intercourse. Science of duty conveys the thought of authority and permanence. Usages of professional intercourse may vary at different times and places. Ethics is compelling, while etiquette is persuasive. They are so closely related that neither can be ignored in the practice of medicine without serious loss. The disregard of them is the occasion of many complaints, much bitter feeling, disrupted friendship, lifelong enmities, and even personal violence.

If the public fails to give the medical profession the degree of respect and confidence to which it is entitled, if the attitude of many intelligent and worthy people to us is one of criticism and distrust, if we fail to inspire sentiments of grateful appreciation, may it not be that we are responsible and that the cause lies in our disregard of professional ethics and etiquette?

The duty that a medical man owes to his profession has greater claims upon him than any other duty. None of us is above criticism, and we cannot expect to receive more courteous treatment than we accord to others.

It behooves us all to give considerable thought to the ethics and etiquette of our conduct as we pursue our vocation and come in contact with fellow men.

### DEL MONTE SESSION, MAY 2-6

This issue has a supplement which contains the official program and Pre-Convention Bulletin for the Association's annual session in Del Monte, May 2-6.

Members are invited to carefully read the program and annual reports. The program is very creditable, and contains many interesting subjects that will be presented by capable guests and California clinicians. It is an educational, postgraduate series of papers, discussions, and scientific demonstrations. No member can lightly conclude that he cannot afford to attend or carelessly pass up this annual session. Members should embrace this opportunity for their personal and professional good.

**Hotels.**—Ample hotel accommodations, all within a few minutes from Hotel Del Monte, are and will be available. Write to Mr. Carl Stanley, Manager, Hotel Del Monte, Del Monte, California; tell him the accommodations you desire. Mr. Stanley is in charge of all hotel reservations in Monterey Peninsula, and will provide you with acceptable, comfortable hotel service. Better write today.

Determine to attend the Del Monte session. Reread the program supplement of this issue. Surely, you will feel the urge to attend.

### OUR INVITED GUESTS

Our annual sessions have always been characterized by the presence of distinguished national clinicians who take prominent part in the scientific program. The array of distinguished guests for this year's annual session is indeed notable: William C. Woodward, Jesse G. M. Bullowa, Cyrus Cressey Sturgis, and Norman F. Miller.

Our Association is extremely favored this year in having outstanding guest speakers from without the State participate in our scientific program for the Del Monte

annual session. They are known well and favorably in our medical world. An extended biography or write-up of each guest is not indicated nor is it necessary. Consequently, only a brief statement is being made in regard to the professional background of each one of our invited guests.

*W. C. Woodward, M.D.* Doctor Woodward requires no introduction. Holding the degree of Doctor of Medicine and Bachelor of Law, he has most efficiently served the profession as director of the Bureau of Legal Medicine and Legislation of the American Medical Association. Sufficient credit cannot be given him for his conscientious and efficient services. Doctor Woodward will bring us the last word upon Social Security legislation and enactments both Federal and State. His address before the third general meeting will be of vital interest to every member.

*Jesse G. M. Bullock, M.D.,* New York City. The following are personal data regarding this guest speaker. Born October 19, 1879, in New York City. A.B. at the College of the City of New York. M.D. at Columbia University, College of Physicians and Surgeons, 1903. Internship: Montefiore Hospital, Mount Sinai Hospital, Willard Parker Hospital, and Sloane Hospital for Women, all of New York. Teaching appointment: Clinical Professor of Medicine, New York University College of Medicine. Hospital appointments: Visiting physician, Harlem Hospital; visiting physician, Willard Parker Hospital; consulting physician, New York Infirmary for Women and Children; and consulting serologist, Long Beach Hospital.

*Cyrus Cressey Sturgis, M.D.* Born in Pendleton, Oregon, April 2, 1891. B.S., University of Washington in 1913; M.D., Johns Hopkins University in 1917. Medical house officer of Peter Bent Brigham Hospital, 1917-1918; First Lieutenant, Medical Corps, United States Army, 1918-1919; assistant resident physician, Peter Bent Brigham Hospital, 1919-1920; resident physician, Peter Bent Brigham Hospital, 1920-1922; teaching fellow in medicine, Harvard Medical School, 1920-1922; faculty instructor in medicine, Harvard Medical School, 1922-1925; associate physician, Collis P. Huntington Memorial Hospital, 1925-1926; assistant professor of medicine, Harvard Medical School, 1925-1927; physician, Peter Bent Brigham Hospital, 1925-1927.

Present positions: Professor of medicine, University of Michigan Medical School, director, Thomas Henry Simpson Memorial Institute for Medical Research; director, Department of Internal Medicine, University Hospital.

Society memberships: Association of American Physicians; American College of Physicians; American Society for Clinical Investigation; Central Society for Clinical Research; American Association for the Advancement of Science; American Clinical and Climatological Association; Washtenaw County, Michigan State, and American Medical Associations.

Doctor Sturgis will conduct the Clinical-Pathological conferences at the second general meeting, and will present a paper before the Section on General Medicine.

*Norman F. Miller, M.D.* Was graduated from the University of Michigan Medical School in 1920. From then until 1926 served as instructor and assistant professor in the Department of Obstetrics and Gynecology at the University of Michigan.

In 1926 became affiliated with the University of Iowa, where he served as associate and later as professor of obstetrics and gynecology. In 1931 returned to the University of Michigan as professor and head of the Department of Obstetrics and Gynecology.

Doctor Miller will present a paper at the first general meeting and before the Section on Obstetrics and Gynecology.

#### DEL MONTE MEETING: PAST PRESIDENTS ADVANCE REASONS FOR ATTENDANCE

Why attend annual sessions of the Association? Past presidents advance reasons why members should attend. If these are not sufficiently inductive, please refer to the supplement of this issue, note the speakers on the programs for scientific sections and general meetings and then ask yourself if you can afford to miss this opportunity

of hearing the latest and practical in the medical world.

Ample hotel accommodations for all in first-class hotels in the Monterey area, five to fifteen minutes from the meeting places. Write today to Mr. Carl Stanley, Hotel Del Monte, Del Monte, California, who is in charge of all reservations, and ask him to assign you the accommodations you desire. But now read what our past presidents say. (Their replies are responses to a letter from the Association Secretary.)

FROM DR. JOHN C. KING: PRESIDENT IN 1909

I enclose copy as requested. Take my own medicine? Well, I am too deaf to hear the proceedings; too deaf to participate in conversation, even with the aid of my acousticon; too courteous to burden my friends with the annoyance of trying to make me hear. No complaint! At eighty-four one is entitled to some disability. Then, too, one gets lonely when old friends have departed. Of course, I have many among the younger set; young fellows like George Kress, Will Roblee, Joe King, Paul Ferrier, lots of others. But why bore them with my deafness? Hope you will have a rousing meeting and that will not be due to numbers alone.

We are selfish. Attendance pays. Professional success, financial and other, depends much on the support, respect and friendship of colleagues. State meetings afford opportunity to acquire one or more of these. "It is more blessed to give than to receive." Give a paper, discussion, appreciation, the friendliness of one's presence.

FROM GEORGE H. KRESS: PRESIDENT IN 1916

Annual sessions of our State Medical Association provide the environment in which, while renewing our allegiance to the guild of the healing art, we at the same time move forward, individually and collectively, in greater attainment of the scientific, fraternal, and organization objectives to which we have pledged our best efforts.

FROM JOHN H. GRAVES: PRESIDENT IN 1921

Reasons why members should attend the annual meeting:

1. More knowledge of recent progress in medicine and surgery can be gained in less time, with less effort than in any other way.

2. To preserve established friendships and create new ones.

3. To cooperate with colleagues in supporting measures that will protect the ideals of the profession and improve our service to the sick.

FROM EDWARD N. EWER: PRESIDENT IN 1925

The California Medical Association's annual meeting affords excellent opportunity to keep in touch with medical science progress. It is in constant movement.

Medical ethics, however, rest upon a foundation of right conduct among ourselves and in our public relations. There is little change in right and wrong. So go to the meeting and see if the officers and delegates you have elected are protecting this foundation against destructive termites from within and without.

FROM WILLIAM H. KIGER: PRESIDENT IN 1928

Would like to urge all members who possibly can to attend the annual meeting in Del Monte, for it is the best way to keep in touch with the activities of the Association. It is very vital during these troublesome times that the membership know what the State Association is trying to do for its members to help them solve many of their problems (professional and economic) that are confronting the profession.

FROM MORTON R. GIBBONS: PRESIDENT IN 1929

It seems to this writer that the advantages of attending California Medical Association conventions must be obvious. We must put first the opportunity to acquire new knowledge, hear men tell of their own work, and to discuss unsettled points.

A vacation, a few days relief from responsibility, especially with the consciousness that the patients at home



will grant such leave more readily than one for pleasure alone.

Renewal of friendships and improving of acquaintance-ship is pleasant and inspiring.

And not the least, the wives of the members have a very good time in a very agreeable environment.

\* \* \*

FROM LVELL CARY KINNEY: PRESIDENT IN 1930

There are two reasons why we should go to Del Monte.

First: This is the yearly opportunity offered by the State Medical Society for reeducation, to keep abreast with medical progress and to find inspiration for doing better medicine.

Second: Violent changes in medical practice threaten us in California. We should be with our delegates while they are considering these problems so that they may know and follow the wishes of the entire membership in their decision.

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FROM JOSEPH M. KING: PRESIDENT IN 1932

I regret that I have been so busy since receiving your letter of February 20 that I have not had the time to formulate a worth while fifty-word statement as you request, but there are many of the other past presidents so much more gifted in this sort of thing than am I that you doubtless will have all the copy you will need.

I shall be at the past presidents' breakfast Tuesday morning if I arise early enough; rather doubtful, in view of the fact that there are no single accommodations available in the convention hotel. I am, it seems, to put it mildly, a rather vigorous snorer, and so I do not inflict my infirmity on others.

\* \* \*

FROM C. G. TOLAND: PRESIDENT IN 1934

It is very necessary that all members of the California Medical Association make a real effort to attend the meeting at Del Monte in May, 1937.

The officers, councilors, and chairmen of the standing committees feel that this is an opportunity for you to hear of the activities of the Society and to express, through your delegates or personally, your opinion on important matters that will be discussed. A great deal of hard work has been done, especially by our Legislative Committee, the results of which you should hear first-hand.

FROM ROBERT A. PEERS: PRESIDENT IN 1935

I am just in receipt of your letter of February 20, and I am enclosing herewith a short statement for the April JOURNAL.

\* \* \*

"Iron sharpeneth iron; so a man sharpeneth the countenance of his friend."—Proverbs 27:17.

Contact between medical men at our annual meetings sharpens the intelligence, promotes increased enthusiasm, and sends the participants home prepared to practice better medicine. It also makes for better fellowship. Be sure to attend the Del Monte meeting.

#### REDUCED RAILROAD RATES TO DEL MONTE

Arrangements have been made whereby members traveling by train may secure reduced rates on railroad tickets to Del Monte.

To secure this reduction a certificate must be presented to the agent at the time when the ticket is purchased.

Members can obtain these certificates by sending a self-addressed stamped envelope and request to the Association's headquarters, 450 Sutter Street, San Francisco.

#### MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

##### Notice to Members

The annual meeting of the Medical Society of the State of California will be held in Hotel Del Monte, Del Monte, California, at 4:15 p. m. on Wednesday, May 5. Meeting room will be announced on the bulletin board.

All members are urged to attend. Annual reports will be rendered and important matters considered.

F. C. WARSHUIS, Secretary.

#### WHY INSURANCE PREMIUMS ARE HIGH

Case 1: "Had I seen the eye one day earlier I could have saved it." Sic.

Case 2: "It was poor technique and not good practice."

Case 3: "Unlicensed physician was allowed to administer light and heat therapy in a doctor's office during illness of the doctor; result, severe burns."

The remark and opinion in Case 1 caused a \$50,000 damage suit to be filed against a very competent physician. The testimony of one physician in this suit caused a nineteen-day trial, a jury disagreement, attorney fees for the defense over \$3,000, and another trial yet to be defended. Carelessness in Case 3 in entrusting the patient's treatment to an unlicensed *locum tenens* agent has caused a suit for heavy damages. These cases occurred quite recently.

Suits, large verdicts, and expensive court procedures, in many instances due to unwarranted opinions, unsubstantial testimony, failure to employ due care, failure to call consultants, neglect in not obtaining x-rays, poorly kept records, and careless comments and opinions, cause malpractice suits and high premium rates for indemnity insurance.

You may not be a defendant today, but you are liable to be tomorrow. That liability will increase as long as physicians neglect to protect themselves against carelessness; as long as physicians will express unfounded opinions and give unwarranted testimony in favor of a plaintiff who seeks to make capital out of fabricated circumstances, and just so long insurance premiums will be exorbitant. When will medical men learn?

#### NORTH AND SOUTH GOLF TOURNAMENT IN DEL MONTE

This annual tournament will be revived in Del Monte on Sunday, May 2. Entries should be sent to Doctor Morgan, who issues the following declaration:

Dr. Robert W. Langley,  
Los Angeles, Calif.

Dear Doctor:

We hereby issue a challenge to the Southern California Medical Golf Association for a North vs. South golf match to be played at Del Monte beginning at 12 noon on Sunday, May 2, 1937, the first day of the State meeting.

The State tournament is on Tuesday afternoon, but we cannot wait that long for a shot at the South. I trust that you remember that we have in our possession the trophy (the beautiful North-South plaque) which we won at our last meeting at Santa Barbara.

In order to give you some chance of winning and to show our charitable intent, we shall permit you to play any doctor whether he belongs to your association or not. We shall even permit you to play refugees from the flood and drought areas.

Daring you to reply and hoping that all of your scratch players develop dermatitis, I am

Medically yours,

JAMES W. MORGAN,  
Secretary, Northern California Medical Golf Association.

#### FOUR CENTS PER DAY!

Under the initials of "L. D. R." the Westchester, New York, Medical Bulletin publishes these figures.

If you read a morning and evening paper, this costs \$30.10 per year.

If you smoke two ten-cent cigars a day, you spend \$73 per year. Five packs of cigarettes per week cost \$39 per year.

Your automobile insurance ranges from \$90 to \$160 per year.

If you indulge in a snack of Camembert and crackers before going to bed five nights a week, your revelry may reach \$35 per year.

To these we would add:

One cocktail before dinner daily.....	\$ 36.50
One highball (good stock) daily.....	54.75
And add one for wife or guests.....	164.25
Shaving cream (scented) and lotion.....	15.00
Chewing gum, two packs per week.....	5.65
Mints, two rolls per week.....	5.65
Two golf balls per week.....	78.00
One movie per week (self).....	31.20

Why figure further. The point is that we all exceed these expenditures, think nothing of it, and yet we do like to "rant and holler" about medical society dues. Use fifty-cent golf balls and cuss them as you play, but you will save sufficient on this one item to pay your county and state dues, without need for further holler. Your loss or winnings at the noon-hour bridge game will more than pay your annual medical dues.

Oh heck! Why figure or comment further? Incidentally, your dues were payable April 1 to avoid loss of membership. Have you sent your check to your county secretary?

## C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

### Public Education

In outlining suggestions for activities that will bring about better understanding on the part of all peoples our thoughts are of that wider province of the physician that lies beyond the laboratory, the hospital, and the consultation room—the education of the public at large.

DeWitt Clinton Poole, discussing propaganda, observes: "Scientific propaganda has invaded every strata of society and government. It no longer constitutes a curiosity, but instead has caused a feeling of alarm on the part of those who think with honesty of purpose as to the future welfare of society. These thinkers have noted the influence that is being exerted by minority high-pressure groups, organized and vocal, because of their effectual use of propaganda." To which thought we add propaganda for selfish ends.

Public health education movements cannot be classified as propaganda. The ends sought are not selfish or for personal gains for a minority group. Their purposes are the enhancement and conservation of the health of all peoples and all classes for the good of all society and government.

To educate the public so that it may reap the benefits of better health and physical well-being is not the sole responsibility of the medical profession. It is a joint responsibility to be assumed by the public, its representatives, and the members of the medical profession. By means of joint effort this responsibility can be discharged. It appears, however, that the initiative must be assumed by the medical profession.

For a number of years, medical organizations have sought in a more or less orderly and sometimes disorderly manner to undertake that initiative. Much has been accomplished, but much still remains to be done to enable the public to ascertain the possibilities of life.

"The perfection of communications—press and radio—has stimulated an interest on the part of perceiving, but not necessarily an intelligent and discretionary mankind in social relations and life. They are commencing to look up and beyond their immediate environment." They are beginning to see others and are comparing standards of living. Envy is creating demand, but again, the demands are not intelligent or based upon sound principles and facts. Education as to accepted principles and facts is the need of these days. To accomplish this the physician must assume an active rôle beyond that of his professional work, as stated in the opening paragraph.

What are the desirable educational means. At this time they can only be enumerated; specific details will be forthcoming:

1. Public lectures on health and scientific medicine before lay groups, Farm Bureaus, Parent-Teacher Associations, women's clubs, luncheon clubs, etc.
2. Public health hours in physicians' offices for preventive medicine and diagnostic physical examinations for those who are unable to assume the regular financial costs.

† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

3. Radio broadcasts.
4. Personal education of patients by the attending physician.
5. Literature and texts in public libraries.
6. Public Health Institutes.
7. Sound local and State legislation, through education of local and State officials and legislators by members of county medical societies.
8. Interest in civic affairs.

As Poole also states: "Ever-widening millions are being raised from the politically negative condition into dynamic political units. It is not merely in an engineering sense that we are passing into a higher and higher-powered age. The dynamics of political action are being intensified in at least the ratio of our concomitant technologic advancement. Society is growing volatile and explosive to a degree we may not yet fully appreciate. Rightly directed the new forces can carry us into an empyrean of universal well-being and contentment. Misdirected, perverted by selfish or unenlightened leadership, it can lure us suddenly into the abyss."

The responsibility of education and right direction must be brought about by the initiative of the medical profession acting through the individual doctor. Is this being recognized by you and your county medical society? If not, will you, member, initiate the program of your county society to educate your public as to sound policies relating to medical care?

### "They Who Said It Couldn't Happen"

A negro sought a lawyer to obtain a divorce, and the following conversation ensued:

"That woman talks too much—she just talks, talks, talks all the time and I can't stand it no longer."

"Well, what does she talk about?"

"Why, she doan say."

For a score of years there has been talk, talk and writing, writing upon the one subject variously designated as state medicine, health insurance, medical service plans, panel systems, governmental medical care, and social security. During the past few years the subject has been considered under the somewhat vague term of "medico-economics."

By means of resolutions, surveys, formulation of principles, and attitudes, the quest has been to assure ourselves that "it couldn't happen." Talk, talk, sporadic outbursts, and even condemnations of groups and individuals, temporarily afforded a flimsy sense of security. There was generated a sense of certainty that medicine and its disciples would be able to resist outside or governmental invasion into our ranks and insure the continuation of the conditions under which medical care was being provided.

But—"it has happened." As has recently been said: "Whether you like it or not, Social Security plans are here to stay." "Our only course open now is to cooperate and seek to shape and guide as best we can."

The cry is commencing to be heard: "Why didn't someone foresee this?" "Why were we not prepared?" "Where did we lack in foresight?" "Why was this not foretold?" "Little do we remember that the basic and only absolute certainty is the uncertainty of the future. Of one thing only can we be sure—that we cannot foretell the order of events, or whether or not they will occur."

"Foresight is not foreseeing, but the effective adjustment of conduct by matching probabilities against significant possibilities. Usually the possibilities that are significant to us are not those that we know *will* happen, but those that *have* happened; and the probabilities that we hope or fear will be realized are those that have been experienced in the past. Our sense of both the possibilities and the probabilities is largely a derivation of the past. It is not foresight, but projected hindsight." One need but review the yesterdays and their events to confirm this statement and obtain the answer as to why it *did* happen while there were those who said "it couldn't happen."

Now the query arises as to what problems the new program will create. Somebody has got to solve these problems. How?

Surely, we all hope that they will be solved by the application to the new conditions of the old principles of

justice out of which grew our institutions; but to do that we must understand those principles, their history, their spirit, their capacity for extension and their right application. Upon this principle your Council and committees are earnestly engaged in developing and creating a program and policy for our members. This policy and program is being transmitted to county society officers for presentation to the members of their organizations. The request is made that every member become conversant with their provisions and conform to their application. "Whether you like it or not" is repeated because unless there is manifested a full coöperation attitude, each non-coöperating member is bound to lessen the possibility of acquiring satisfactory adjustments and conditions in the social security program of government.

Remember, "It can happen." By cohesive unity untoward, undesirable happenings may be minimized. Cease talking. Act!

### Annual Reports

This issue contains the annual report of the Committee on Public Relations as well as the reports of other standing committees that are concerned with public affairs and relations. Members should read all of these reports. To not trespass too greatly upon your reading time, the articles in this department are being limited. Read the Pre-Convention Bulletin and program contained in the Supplement.

### Committee on Public Relations

A meeting of the Committee on Public Relations was held in San Francisco, February 27, 1937.

1. Present: Chairman C. A. Dukes, M. R. Gibbons, F. B. Clarke, J. B. Harris, D. Crosby, Howard Morrow, Hartley Peart, Howard Hassard, F. C. Warnshuis, Louis Packard, and T. Henshaw Kelly.

2. *Resettlement Administration.*—The Director reported upon his interview with the Regional Director of the Federal Resettlement Administration. The Administration is desirous of establishing a policy for medical service for the clients of the Administration. A conference is to be held in Los Angeles on March 2 relative to seventeen family State projects.

Pending further action by the Council and the House of Delegates, the Director was instructed, on motion of Dan Crosby, seconded by J. B. Harris, to recommend that the Administration set up a budget for medical care for each resettlement region and that there be free choice of physicians. That arrangements be made to pay for medical services on a fee schedule similar to the Los Angeles Water Department employees or the San Fernando plan under the supervision of the County Medical Society, and thus provide for the direct payment of the physician.

3. The annual report of the committee was approved. The Director was instructed to attach Dr. Lyell Kinney's report as an appendix. Upon motion of M. R. Gibbons, seconded by J. B. Harris, the Chairman was directed to present a suitable gift of appreciation to Doctor Kinney during the Del Monte session.

4. The Director reported upon his conference with the Chief of the License Division of the State Highway Traffic Department relative to physical standards to be met by automobile drivers applying for license. The State Division requests appointment of a committee to recommend these standards and to act in a medical advisory capacity.

On motion of M. R. Gibbons, seconded by Dan Crosby, the Chairman and the Director were authorized to appoint this committee.

5. *Speakers' Bureau.*—The Director recommended that a speakers' bureau be created. The Director reported upon weekly requests being received from lay organizations for medical speakers. He cited the Los Angeles Speakers' Bureau. He stated that he had filled some of these requests personally and had after much difficulty been able to secure members to fill these engagements.

On motion of Dan Crosby, seconded by J. B. Harris, the Director was instructed to take steps to address a special letter to county societies requesting them to formulate speakers' bureaus and to create an Association Central Speakers' Bureau.

Doctors Dan Crosby and T. Henshaw Kelly suggested that it was highly important that a corps of fifteen to twenty-five well-informed members be enlisted upon legislation and other important pending questions that are of public concern.

On motion of Dan Crosby, seconded by Fred B. Clarke, the Director was authorized to pay from the Committee's budget fund the expenses of speakers who requested reimbursement where engagements required hotel or extraordinary travel expense.

6. *Veneral Disease Educational Movement.*—The Director indicated the need and desirability of formulating a sustained program of public education on venereal disease and coöperation with the Special Committee of the State Association, of which Doctor Morrow is chairman.

Upon motion of Dan Crosby, seconded by J. B. Harris, the Chairman was authorized to appoint a special subcommittee to confer with Doctor Morrow's committee, to outline a plan, to prepare publicity items, and to report at the next meeting.

The Chairman appointed Dan Crosby, J. H. Graves, and Fred B. Clarke on such committee.

7. *Cancer Campaign.*—The Chairman called attention to the public cancer education campaign to be held in March. On motion of M. R. Gibbons, seconded by F. B. Clarke, the Committee recommended the coöperation of county societies.

Adjourned, to meet in Del Monte.

C. A. DUKES, Chairman.

F. C. WARNSHUIS, Director.

## COMPONENT COUNTY MEDICAL SOCIETIES

### HUMBOLDT COUNTY

The Humboldt County Medical Society met on the evening of March 4 at the General Hospital, with President Allan R. Watson presiding. Twenty members were present, and two guests—Doctors Matthew Hosmer and Howard Brown of San Francisco.

The Legislative Committee, headed by Doctor Norman, reported that they were active and ready to carry out any instructions that may come to their attention, of any new legislation.

Doctor Hosmer presented a paper on *Neuralgias and Pains From Ear, Nose, and Throat Conditions*. Doctor Brown discussed *Neuralgias and Pains From a Neurologist's Side of the Question*.

These papers were very much enjoyed, and all present voted it one of our best meetings.

LAWRENCE A. WING, Secretary.

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### SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was called to order by the president, Dr. Raymond Wallerius, on February 16 at the Auditorium on Twenty-ninth and L streets. There were seventy-seven members and guests present.

The speaker of the evening, Dr. Eugene S. Kilgore, Professor of Medicine at the University of California, gave a very interesting and informative talk on *Coronary Occlusion: Its Symptoms, Diagnosis, and Treatment*. The differential diagnosis between real anginal pain and false anginal pain was first discussed in some detail by Doctor Kilgore. The subject of coronary occlusion and thrombosis was then presented, with special emphasis being placed upon some of the newer ideas in treatment, i. e., use of the oxygen tent early in the attack; the use of small doses of quinidin, to prevent further attacks; and vasodilator drugs during the acute attack. Discussion by Doctors Gundrum, O. Johnson, Scatena, Reardan, and Pulford.

Dr. J. B. Harris, Chairman of the Legislative Committee of the California Medical Association, gave an interesting preview on the present legislature, stating that there are 3,897 bills in at present, 7 per cent of which (260 bills) concern the medical profession. Thirty-three bills pertain to the Medical Practice Act.

The application of Dr. E. R. Cole for transfer from the Fresno County Society was read for the first time.

The minutes of the last Board of Directors meeting were read and approved. Doctor Harris suggested that the two resolutions presented be sent to the Council of the California Medical Association for approval.

Doctor Scatena reported that the Banquet Committee was doing splendidly, and that the banquet would be held at the Sutter Club. A good program was assured by the committee.

GLENN E. MILLAR, *Secretary*.

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#### SAN DIEGO COUNTY

The San Diego County Medical Society begs to report the following news items:

February 9—Dr. S. J. McClendon, Society President, presented Dr. J. B. DeLee, who was guest speaker to perhaps the largest gathering ever attending our monthly medical dinners. Past presidents of the San Diego County Medical Society were special guests of honor. Doctor De Lee's subject, *Fetal Birth Injuries*, was well received. February 9 was also Ladies' Night.

February 23—San Diego Galen Club, Dr. Paul E. Wedgewood, President, presented a symposium on *Chest Disturbances*. Doctors M. J. Hogan and R. A. Schneiders read papers. Dr. R. H. Sundberg presided as chairman.

March 1—The Society met at a special dinner, honoring Dr. Walter Schiller of Vienna, Austria. Doctor Schiller's discourse dealt with *Endocrinological Aspects as Related to Gynecology*.

Dr. W. H. Geistweit was reappointed to the California Board of Medical Examiners.

F. E. TOOMEY.

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#### SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell Auditorium, Monday evening, March 8.

The secretary read a communication from the Police and Fire Commission, in which they asked for the names of members who would be willing to conduct sobriety tests at the police station. A panel of three will be selected for a six months' service at \$25 per month each.

Doctor Johnson introduced the speaker of the evening, Dr. John McKenzie Brown of Los Angeles, who gave an extremely interesting, instructive, and timely talk upon *Sinusitis in Children*.

The paper was discussed by Dr. Pierre Voile of Los Angeles and Doctors Profant, Johnston, Lamb, Howard Eder, Hunt, Henderson, Means, and Mellinger.

The meeting was well attended and greatly enjoyed by all.

Doctor Jones of the Santa Maria branch asked the secretary to notify the membership that their branch wished to have the regular May meeting at Santa Maria under their auspices, promising their usual enjoyable time.

WILLIAM H. EATON, *Secretary*.

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#### VENTURA COUNTY

The regular monthly meeting of the Ventura County Medical Society was held at the Satcoy Country Club on Tuesday, March 9.

A report of the second annual Secretaries' Conference was given by the secretary. It was moved by Doctor Osborn, seconded by Doctor Shore, that the secretary be commended for the completeness and clarity of the report. Carried.

A plan of ethical advertising as a society was presented by Mr. Dunnigan of the *Ventura Star*. In the discussion following, the members present were favorable to the idea, but felt that it should be carried on in the various newspapers of the county, rather than in just a single newspaper. Doctor Hendricks appointed Doctor Shore to investigate the cost of advertising in the various newspapers throughout the county and suggest a plan for carrying on the campaign.

It was moved by Doctor Strong, seconded by Doctor Osborn, that the secretary be instructed to write a letter to the members who were not present at the meeting, outlining the plan and asking for a definite expression of an opinion from them. Carried.

It was moved by Doctor Neilsen, seconded by Doctor Bardill, and unanimously carried, that Dr. Thomas W. Hagerty be accepted as a member of the Society.

The meeting was then turned over to Doctor Shore, the program chairman, who introduced Doctors Moore, Walker, Wells, and Witten of the County Hospital. They presented a *Symposium on Gynecologic Cases From the County Hospital for the Past Year*.

A. A. MORRISON, *Secretary*.

#### CHANGES IN MEMBERSHIP

##### New Members (52)

*Alameda County*.—John James Hayes, Harold E. Roe.

*Butte County*.—Myrtle A. Cummings, C. E. Plumb.

*Contra Costa County*.—James Alison Cary.

*Fresno County*.—George T. Hoskins, George W. Olson,

Madge Peirsol, Eliot Sorsky, K. L. Stout.

*Kern County*.—J. M. Krevitt.

*Kings County*.—E. C. Bond, P. K. Edmunds, Charles T. Rosson, Jr.

*Los Angeles County*.—Charles A. Bailey, Elmer J. Ball, Leon P. Belous, Ralph W. E. Bledsoe, F. Earl Brown, Stanley S. Bruechert, Willard T. Conley, H. C. Crumrine, William G. Durnin, Vincent P. Flynn, J. Edison Goldsmith, Ralph R. Greenschpoon, John Hromadka, Abraham Marians, Tesla Nicola, Fenn E. Poole, Samuel Reznick, Lawrence A. Schueler, Samuel Shore, Bernard Silver.

*Mendocino-Lake County*.—F. J. Morley.

*Merced County*.—Raffaele Moretti.

*San Diego County*.—Bert A. Dannenberg.

*San Francisco County*.—Edward Campion, George C. Esker, Jr., Jean S. Feldheim, Webb Haymaker, Jay Jacobs, Jess P. Jacobson, E. Horace Klabunde, Leon M. Michels, Bernard Strauss, Jesse H. West.

*San Mateo County*.—Gordon Morrison, Milton F. Novotny, Phillip Seeley.

*Tulare County*.—F. Lynn Smith.

*Ventura County*.—Alexander W. Cruden.

##### Transferred (8)

John H. Childrey, from Santa Barbara County to San Mateo County.

Edwin R. Cole, from Fresno County to Sacramento County.

Fritz Held, from Orange County to San Bernardino County.

Elliott P. Smart, from Los Angeles County to San Joaquin County.

Frank P. Topping, from Sacramento County to Monterey County.

Paul A. Werthmann, from Merced County to San Joaquin County.

F. W. Yocum, from San Luis Obispo County to Stanislaus County.

##### Resigned (1)

Coleman A. Block, from San Francisco County.

## In Memoriam

**Busby, James Leslie.** Died at Pasadena, February 23 1937, age 46. Graduate of the Ohio State University College of Medicine, Columbus, Ohio, 1913. Licensed in California in 1929. Doctor Busby was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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**Tomlinson, Richard Frank.** Died at San Francisco, March 13, 1937, age 64. Graduate of Hahnemann Medical College of the Pacific, San Francisco, 1900, and licensed in California the same year. Doctor Tomlinson was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



## THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

### Del Monte Annual Session

The convention in Del Monte is the thought uppermost in the minds of many of the Auxiliary members, and they will be pleased to learn that our national president, Mrs. Fitzgerald, intends to be present at that time. The convention will be held the first week in May, and much thought has been given all details by Mrs. John Hunt Shepard, who is the convention chairman. Monterey and Santa Clara auxiliaries are assisting her in every way. The convention program is published elsewhere in this JOURNAL.

It is with great regret that Mrs. Weil tendered her resignation as president-elect, but unavoidable circumstances caused her to change her plans. The Auxiliary is very fortunate in having Mrs. Hobart Rogers accept the vacant position. She has been recording secretary, and is familiar with the work of the organization and is most capable to discharge the duties of president. Let us all give her our support and help to make her administration a success.

The April edition of *The Courier* will be mailed to each Auxiliary member during the first week in April or earlier. If anyone does not receive a copy, please notify me or Mrs. Harry O. Hund, 400 Grand Avenue, San Rafael, and a copy will be sent at once.

MRS. ROBERT M. FURLONG,  
State Publicity Chairman.

### News Letter

#### Dear Auxiliary Members:

The question is often asked, "How can we interest more doctors' wives in our organization?" And my answer is, "Do not spend too much time trying to sell an idea to an quality of personnel that makes any organization successful. The majority of people have fixed ideas by the time they are twenty-five or thirty. It is not quantity, but quality of personnel that makes any organization successful."

Never forget that we are auxiliary and our only purpose for organization is to serve the profession to which our husbands belong. Keep in mind also that our National Auxiliary has adopted certain policies and that if we work together as a national unit we can achieve more for the profession in a large sense than by concentrating all of our strength on local activities.

Men cannot rise to their highest and best capabilities unless their wives, too, possess the idealism of their profession. Yes, the wives of doctors need training also—training in character, training in intellectual poise, and training to live this rôle of doctor's wife.

MRS. DAVID S. LONG,  
First Vice-President, National Auxiliary.

### Component Auxiliaries

#### Alameda County

The Woman's Auxiliary to the Alameda County Medical Association held a special luncheon on February 12 at the Claremont Country Club, honoring Mrs. Andrew J. Thornton, State President, and Mrs. Willard H. Newman, State Corresponding Secretary.

Before the luncheon a reception was held for the one hundred members and guests assembled. The tables were gay with spring flowers, which had been arranged by the general chairman for the afternoon, Mrs. A. A. Alexander and her committee.

†As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Robert M. Furlong, Chairman of the Publicity and Publications Committee, Linden Lane, San Rafael. Brief reports of county auxiliary meetings will be welcomed by Mrs. Furlong and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

Following the luncheon, Mrs. Clarence Page introduced the honored guests, as well as the local members of the State Board, Mesdames Hobart Rogers, Charles Hall, and Frank Makinson.

After a brief business meeting Mrs. Thornton gave a splendid talk, giving highlights of other auxiliaries of the State, and complimenting the Alameda County Auxiliary on their Public Health Institute held in 1935. She emphasized the need of increasing Auxiliary membership through the influence of the individual member, and asked that the need of forming auxiliaries among unorganized counties be stressed when the opportunity arose at the coming State convention. Influence could also be used among laymen to correct and guide opinions where public health matters are concerned, and unlimited opportunities to serve are to be found when important legislation is pending.

The afternoon concluded with a delightful musical program—a trio of violin, piano, and cello—played by Mesdames Milton Shutes, Beau Mark Palmer, and Herbert Stoltz, all Auxiliary members. They played a Mendelssohn trio for an opening number, and "Moment Musicales" by Schubert as an encore. MRS. JOHN O'HANNESON,

Publicity Chairman.

#### Los Angeles County

The Woman's Auxiliary to the Los Angeles County Medical Association met on Tuesday, February 23, at the Pacific Coast Club in Long Beach, with 123 members present. President Mrs. Clifford A. Wright presided.

The luncheon tables were bright with red, white, and blue decorations, arranged by the Long Beach committee.

Honor guests were the wives of Navy doctors. The only speaker was Mr. Ben Read, who discussed pending legislative measures in which the medical profession is interested.

Immediately after lunch the group was conveyed to San Pedro, and from there in waiting water taxis to the U. S. S. *Relief*, hospital ship of the Navy. This was an unusual treat to all the members, and much credit is due the Long Beach committee, headed by Mrs. F. B. Settle, who arranged it.

MRS. ROBERT L. CARROLL.

#### Marin County

Mrs. Andrew J. Thornton of San Diego, State President of the Woman's Auxiliary to the California Medical Association, and Mrs. Willard H. Newman, also of San Diego, who is State Secretary, were honored guests at the luncheon and meeting of the Woman's Auxiliary to the Marin County Medical Society at the Meadow Club on February 11.

Mrs. Harry O. Hund, President of the Marin Auxiliary, entertained the two distinguished visitors at dinner at her home on Grand Avenue.

Mrs. Thornton spoke on the work of the Auxiliary and its plans. A musical program was presented by the Marin Junior College Octet, under the direction of Clinton Lewis.

#### Santa Clara County

The February 8 meeting was a luncheon, held at the San Jose Country Club, forty-two members being present. Honored guests and speakers were: Mrs. Andrew J. Thornton, State President, and Mrs. Willard H. Newman, State Corresponding Secretary of San Diego. Mrs. Thornton painted a verbal picture of the history and organization of the medical auxiliaries and stressed the importance of a well-functioning social and educational group.

A letter was read from the American Association of University Women, inviting members of the Auxiliary to hear Dr. Leo Eloesser of San Francisco, recently returned from a three months' stay in Russia, speak on *Medical Education, Care and Organization in the Soviet Union*.

Mrs. Charles E. Moore, President, announced March 1 was selected by the Auxiliary committee for an informal dinner dance to be held at the San Jose Country Club for members and their husbands.

Mrs. John Hunt Shephard, Chairman of the State Convention, to be held at Del Monte in May, urged all members to take an active part in the various committees.

MRS. DANIEL BILKER,  
Publicity Chairman.

## MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

## NEWS

### Coming Meetings

*American Medical Association*, Atlantic City, New Jersey, June 7-11. Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

*California Medical Association*, Del Monte, May 3-6. F. C. Warnshuis, M. D., 450 Sutter Street, San Francisco, Secretary.

\* \* \*

*American College of Physicians*, St. Louis, April 19-23. Mr. E. R. Loveland, 4200 Pine Street, Philadelphia, Executive Secretary.

*Arizona State Medical Association*, Yuma, April 1-3. D. F. Harbridge, M. D., 15 East Monroe Street, Phoenix, Secretary.

*Association of Western Hospitals, the Association of California Hospitals, and the Western Conferences of Catholic Hospital Association*, Los Angeles, Biltmore Hotel, April 12-15. Secretary, Hotel Whitcomb, San Francisco.

*Western Branch of American Public Health Association*, Phoenix, Arizona, April 13-15. William P. Shepard, 600 Stockton Street, San Francisco, Secretary.

### Medical Broadcasts\*

#### *American Medical Association*

The American Medical Association and the National Broadcasting Company are presenting the second series of dramatized health broadcasts, under the title, "Your Health." The first broadcast in the new series, the thirty-second dramatized coöperative broadcast under the title "Your Health," was given October 13, 1936. The theme for 1936-1937 differs slightly from the topic in the first series, which was "Medical Emergencies and How They Are Met." The new series is built around the central idea that "one hundred thousand American physicians in great cities and tiny villages, who are members of the American Medical Association and of county and state medical societies, stand ready, day and night, to serve the American people in sickness and in health."

The program will be on the Blue network.

The time of the broadcast is Tuesday afternoon, one o'clock, Pacific time.

The topics are announced monthly in advance in *Hygeia*, the health magazine, and three weeks in advance in each issue of the *Journal of the American Medical Association*.

\* \* \*

#### *San Francisco County Medical Society*

A radio broadcast program for the San Francisco County Medical Society for the month of April is as follows:

Tuesday, April 6—KYA, 6 p. m.

Tuesday, April 13—KYA, 6 p. m.

Tuesday, April 20—KYA, 6 p. m.

Tuesday, April 27—KYA, 6 p. m.

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#### *Los Angeles County Medical Association*

The radio broadcast program for the Los Angeles County Medical Association for the month of April is as follows:

Thursday, April 1—KECA, 10:45 a. m. The Road to Health.

\*County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Saturday, April 3—KFI, 9:15 a. m., The Road to Health.  
Saturday, April 3—KFAC, 10:15 a. m., Your Doctor and You.

Thursday, April 8—KECA, 10:45 a. m., The Road to Health.

Saturday, April 10—KFI, 9:15 a. m., The Road to Health.

Saturday, April 10—KFAC, 10:15 a. m., Your Doctor and You.

Thursday, April 15—KECA, 10:45 a. m., The Road to Health.

Saturday, April 17—KFI, 9:15 a. m., The Road to Health.

Saturday, April 17—KFAC, 10:15 a. m., Your Doctor and You.

Thursday, April 22—KECA, 10:45 a. m., The Road to Health.

Saturday, April 24—KFI, 9:15 a. m., The Road to Health.

Saturday, April 24—KFAC, 10:15 a. m., Your Doctor and You.

Thursday, April 29—KECA, 10:45 a. m., The Road to Health.

**Corrections.**—The stenographic report of the Coronado Clinical-Pathological Conference appeared in the March issue (pages 151-157). Much to our regret a number of errors appeared therein: F. Volhard and Th. Farr were written Bolard and Farre; Clifford Allbut was Clifford Orbutt; v. Basch was Bausch; Gull and Sutton appeared Gullen Sutton; Emanuel Libman for Manuel Lipman; Pel-Ebstein for Pel Epstein; Buerke for Bunting.

### University of California Medical History Will Be Reviewed.

The history of medicine in California from the time that the Indians experimented with the old reliable Jimson weed, up to the period of deep radiation, ethylene gas and cesarean section, is to be reviewed in a series of seminars at the University of California Medical School, to which all members of the profession are invited. The seminars are to be held under the direction of the Division of Medical History, of which Dr. Langley Porter, Dean of the Medical School, is the head.

The first of the seminars was held on Wednesday, March 24, when Dr. H. Harris, associate professor of clinical medicine, told how the site for the Medical School was obtained and how the first buildings were constructed. On Wednesday, March 31, Dr. E. L. Gilcreest, instructor in surgery, spoke of Dr. H. H. Toland and his work. The school, established by Doctor Toland at the end of the Civil War, became the nucleus of the present imposing Medical Center, and much of the early history of the school revolves around this famous old-time practitioner. On Wednesday, April 14, Dr. W. I. Terry, clinical professor of surgery, will discuss Dr. T. W. Huntington. On April 21, Dr. Chauncey W. Leake, professor of pharmacology, will speak of Dr. James Black, and in the concluding seminar on April 28, Dr. H. C. Moffitt, clinical professor of medicine, will talk on the life and career of Dr. William Watt Kerr. Doctor Huntington, Doctor Black, and Doctor Kerr were outstanding figures in the history of California medicine, doing their work at a time when the establishment of medicine and medical practices on the last frontier vied in interest with the stamping out of banditry and the establishment of some semblance of law and order.

Each of the lectures will be held at 8 p. m. in Toland Hall, in the University Hospital. This hall was named in honor of Doctor Toland, who is the subject of Doctor Gilcreest's talk.

**First Federal Old-Age Benefits Payments Certified by Social Security Board.**—The Social Security Board today started another chapter in this nation's social legislation history by placing its approval on the first eight claims filed for lump-sum payments since the inauguration of the Social Security Act's federal old-age benefits program on January 1, 1937. More than 24,500,000 wage earners are now accumulating credits toward the monthly annuities for life, payment of which will begin to qualified persons in 1942. . . .

A lump-sum payment is made to a worker who reaches 65, in the event he is not eligible for monthly retirement benefits, or to his estate if he dies before 65. The settlement is made on the basis of  $3\frac{1}{2}$  per cent of the wages received after December 31, 1936. A worker is not required to retire at 65 to receive the lump-sum benefit.

The Board explained that every worker, no matter how young he is when he enters employment covered by the act, will receive in benefits more than he has paid in taxes on his wages under the act. The eight claims certified today are for  $3\frac{1}{2}$  per cent of wages received. Those who will receive these sums paid a tax of only 1 per cent of their wages.

The Board's actuaries have calculated that claims may be made by 123,000 persons who reach 65 during 1937. The estimated number of claims filed by workers who became 65 prior to 1942 may increase in 1938 to approximately 136,000 and probably will continue to grow slowly until 1942, when a downward trend is foreseen.

The Board expects payment of death claims will increase slowly for a number of years. Actuarial figures place the number of death claims that may be made during the present year at approximately 191,000. In 1938, it is expected that this number may increase to approximately 194,000 and will continue to grow until 1980, when the figure for 1937 will be about doubled.

The payment of lump-sum benefits, the first of which were authorized today, is preliminary to the Social Security Act's major program of monthly old-age retirement benefits, for which payment begins in 1942. Benefits, ranging from \$10 to \$85 a month for life, will be paid to qualified individuals on retirement from regular employment at 65 or over who have received a total of \$2,000 or more in wages earned in five or more different calendar years after 1936 and before reaching age 65.

The number of claims filed for lump-sum payments is increasing, the Board reported, and procedures for prompt settlement are now being developed. Claims may be filed at any of the 100 field offices of the Board for forwarding to Washington or may be mailed directly to the Board in Washington.

The Board stated that its personnel in these field offices throughout the country is now equipped to give assistance to claimants in the preparation of their claims or in securing the information necessary to expedite payment of their claims. It was indicated that the personnel of the Board will be adequate to handle all such cases, so that no claimant will require for this purpose the services of anyone not employed by the Board.

**Lane Lectures: 1937 Series.**—The twenty-sixth course of Lane Medical Lectures will be delivered by Eugene F. Du Bois, A. B., M. D., Medical Director of Russell Sage Institute of Pathology, Professor of Medicine of Cornell University Medical College, and Physician-in-Chief of New York Hospital, on the evenings of April 5, 6, 7, 8, and 9, at 8:15 o'clock in Lane Hall, Stanford University School of Medicine, Sacramento Street near Webster, San Francisco.

The medical profession, students, teachers, and research workers in medicine and allied sciences are cordially invited to attend.

The Lane Medical Lectures were founded in 1896 by the late Dr. Levi Cooper Lane and have been given as follows:

1896. Sir William Macewen, M. D., Regius Professor of Surgery, University of Glasgow—Surgery of the Brain.  
1897. Christopher Heath, F. R. C. S., England, Professor of Clinical Surgery, University College, London—Congenital Malformations, Aneurism, and Other Surgical Topics.

1898. Sir Thomas Clifford Allbutt, M. D., F. R. S., Regius Professor of Physics, University of Cambridge, England—Diseases of the Heart.

1899. Nicholas Senn, M. D., Ph. D., LL. D., Professor of Surgery, Rush Medical College—Topics in General Surgery.

1900. Sir Michael Foster, K. C. B., D. C. L., Professor of Physiology, University of Cambridge, England—History of Physiology.

1901. Sir Malcolm Morris, F. R. C. S., Edinburgh, M. R. C. S., England, Surgeon, Skin Department, St. Mary's Hospital, London—Social Aspects of Dermatology.

1902. Sir Charles B. Ball, M. Ch., F. R. C. S., Ireland, Regius Professor of Surgery, University of Dublin—Diseases of the Rectum.

1903. Oscar H. Allis, M. D., Philadelphia, Pennsylvania. Dislocations and Fractures Involving Larger Joints.

1904. William H. Welch, M. D., LL. D., Professor of Pathology, Johns Hopkins University, Baltimore—Infection and Immunity.

1905. Sir Patrick Manson, K. C. M. G., F. R. S., School of Tropical Medicine, London—Tropical Diseases.

1906. John C. McVail, M. D., D. P. H., Cambridge, Glasgow—Practical Hygiene, Epidemics, and Preventive Medicine.

1910. Reginald Heber Fitz, M. D., LL. D., Hersey Professor of Theory and Practice of Medicine, Harvard University, Boston, Massachusetts—A Consideration of Some Features of the Lymphatic System.

1911. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna—The Importance of Ophthalmology in Its Relation to Systemic Diseases.

1913. Sir Edward A. Schafer, LL. D., Sc. D., M. D., Professor of Physiology in the University of Edinburgh—Internal Secretion.

1915. Frank Billings, M. S., M. D., Professor of Medicine in the Rush Medical College, Chicago, Illinois—Focal Infection.

1917. Simon Flexner, M. D., LL. D., Director of Laboratories, Rockefeller Institute for Medical Research, New York City—Physical Basis and Present Status of Specific Serum and Drug Therapy.

1919. Alonzo Englebert Taylor, Professor of Physiological Chemistry, University of Pennsylvania, Philadelphia—The Feeding of the Nations at War.

1921. L. Emmett Holt, M. D., Sc. D., LL. D., Emeritus Professor of Pediatrics, College of Physicians and Surgeons, Columbia University, New York City—Growth and Nutrition.

1924. Ludwig Aschoff, M. D., Professor of Pathology, University of Freiburg, Germany—Selected Topics in Pathology.

1925. Vittorio Putti, M. D., Professor of Orthopedic Surgery, University of Bologna, Director Rizzoli Institute of Bologna, Italy—Selected Topics in Orthopedic Surgery.

1928. F. d'Herelle, M. D., Professor of Bacteriology, Yale University, New Haven, Connecticut—Bacteriophagy.

1929. Walther Straub, M. D., Ph. D., Professor of Pharmacology, University of Munich, Munich, Germany—Selected Topics in Pharmacology.

1930. Charles R. Stockard, M. D., Ph. D., Sc. D., Professor of Anatomy, Cornell University Medical School, New York City—Constitution.

1933. J. C. Drummond, Sc. D., Professor of Biochemistry, University College, University of London, London, England—Biochemical Studies of Nutritional Problems.

1935. G. V. Anrep, M. D., Sc. D., F. R. S., Professor of Physiology, Egyptian University, Cairo, Egypt—Regulation of the Cardiovascular System.

Doctor Du Bois will give the following lectures:

Lecture 1

April 5—Heat Production and Heat Loss.

Lecture 2

April 6—Radiation, Convection and Vaporization.

Lecture 3

April 7—The Significance of the Surface Area of the Body.

Lecture 4

April 8—The Regulation of Body Temperature.

Lecture 5

April 9—Chills and Fever.

**Southern California Medical Association.**—The next semi-annual meeting of the Southern California Medical Association will be held in Coronado, at the Hotel Del Coronado, on April 9 and 10.

Guest speakers will include Dr. Eugene F. DuBois, Professor of Medicine, Cornell Medical College and Medical Director of the Russell Sage Institute, New York City, and Dr. Hugh Cabot of the Mayo Clinic, Rochester.

This will be an unusually good meeting and a large attendance is expected. Make your reservations at the hotel now.

For further information, write to Robert W. Langley, M. D., Acting Secretary, Los Angeles.

**Dengue in 1934-1935.**—In 1934 two cases of this disease were reported in San Francisco. These are the first cases reported to have originated in Northern California. While clinically they were typical of dengue, there is the disturbing factor that, so far as is known, no mosquitoes known to transmit the disease have been found in the vicinity of San Francisco. The cases were reported in detail in the *Archives of Internal Medicine*, 56:1067-1096, December 1935, by Dr. G. Cheney.

Cases previously reported are:

In 1922, three cases were reported in Southern California, and imported from the epidemic area in Texas.

In 1929, three cases; 1932, one case; 1933, one case. All these were reported in Southern California, and the diagnosis may be open to some question.

#### International Congress on Hepatic Insufficiency.

While the Universal Exhibition is being held in Paris, the International Congress on Hepatic Insufficiency will be in session at Vichy on the 16th, 17th and 18th of September, 1937, under the presidency of a member of the Academy of Medicine, Prof. Maurice Loeper, of Paris. It will be divided into two sections: (1) Medicine and biology; (2) Medical, surgical, and hydrological therapy.

Papers will be submitted in the two sections by gentlemen of different countries.

It may be recalled that this congress will be preceded by the Second International Congress on Gastro-Enterology, to take place in Paris on September 13, 14, and 15, 1937, under the presidency of Prof. Pierre Duval, at which two questions will be discussed:

1. The early diagnosis of cancer of the stomach, under the presidency of Professors P. Duval and Gosset of Paris, and of Professor Konjetzny of Berlin.

2. Acute and chronic occlusion of the small intestine: Authors have been selected in England, Belgium, Spain, the United States, Italy, and Poland for papers dealing with this latter question.

Those desiring to attend these congresses may receive information by applying to Dr. Anthony Bassler, 121 East Seventy-first Street, New York City. A large contingent from this country are arranging to go.

**Automobile Mortality Summary.**—Report by the Department of Commerce Bureau of the Census, Washington, D. C., of deaths from automobile accidents in eighty-five major cities for four-week period ending February 13, 1937, includes, among other cities, the following:

	Total Deaths for—					
	Four Weeks Ending			Eight Weeks Ending		
	Feb. 13, 1937	Jan. 16, 1937	Feb. 15, 1936	Feb. 13, 1937	Feb. 15, 1936	Feb. 15, 1936
Total (85 cities) .....	715	975	486	1,690	1,203	1,203
Chicago .....	50	79	44	129	84	84
Long Beach .....	7	7	3	14	11	11
Los Angeles .....	50	77	53	127	122	122
New York .....	78	98	42	176	107	107
Oakland .....	11	6	6	17	17	17
Philadelphia .....	25	35	16	60	38	38
St. Louis .....	11	12	18	23	36	36
Salt Lake City .....	6	5	5	11	16	16
San Diego .....	8	6	2	14	9	9
San Francisco .....	8	7	3	15	5	5
Seattle .....	6	15	8	21	29	29
Spokane .....	0	10	2	10	3	3

**Poliomyelitis in California, 1934-1935.**—In 1934 California experienced its largest epidemic of poliomyelitis, having 3,399 cases, with 110 deaths reported.

During the past ten years we have had three extensive epidemics:

Year	Cases	Deaths
1926 .....	187	30
1927 .....	1,298	224
1928 .....	303	80
1929 .....	171	46
1930 .....	1,903	157
1931 .....	293	48
1932 .....	191	31
1933 .....	170	14
1934 .....	3,399	110
1935 .....	831	67

The age distribution of the cases reported in 1935 was very interesting:

	Cases	Per Cent
Under 1 year .....	30	0.80
1 to 4 years .....	505	14.86
5 to 9 years .....	888	26.13
10 to 14 years .....	677	19.92
15 to 19 years .....	334	9.83
20 to 24 years .....	309	9.09
25 to 34 years .....	402	11.83
35 to 44 years .....	145	4.26
45 to 54 years .....	42	1.24
55 plus .....	21	.62
Adult .....	6	0.17
Unknown .....	40	1.17
<b>Total</b> .....	<b>3,399</b>	<b>100.00</b>

#### Cases by Months—1934

January .....	25
February .....	27
March .....	18
April .....	38
May .....	314
June .....	1,192
July .....	767
August .....	429
September .....	236
October .....	186
November .....	104
December .....	73
<b>Total</b> .....	<b>3,399</b>

This epidemic has some interesting features. The fatality rate was unusually low—3.2 per cent compared with 8.3 per cent in 1930, and 17.3 per cent in 1927 over previous epidemic years. There is some indication that the disease is less virulent; however, a large part of this reduction in fatality is due to the inclusion of mild abortive cases which previously were not diagnosed and reported as cases. The percentage of paralytics in this epidemic is for the same reason correspondingly low.

Another interesting feature was in institutional outbreaks experienced in Los Angeles and Orange counties. This is unique in the history of poliomyelitis. In the Los Angeles Isolation Hospital during the epidemic of 1934 over 136 nurses, attendants, and doctors contracted the infection. In 1935 over forty-five came down with the same disease. In Orange County during the epidemic of 1934 over sixty cases developed poliomyelitis. No definite explanation of these institutional outbreaks has been given, although it has been suggested that excessive fatigue may have been a factor. There was no indication that isolation technique as is usually practiced was not adhered to by the personnel.

#### Deaths Due to Accidents in City for—

	Deaths Due to Accidents in City for—					
	Four Weeks Ending			Eight Weeks Ending		
	Feb. 13, 1937	Jan. 16, 1937	Feb. 15, 1936	Feb. 13, 1937	Feb. 15, 1936	Feb. 15, 1936
Total .....	584	803	369	1,387	928	928
Chicago .....	49	77	44	126	83	83
Long Beach .....	7	7	3	14	6	6
Los Angeles .....	47	58	42	105	98	98
New York .....	78	98	42	176	107	107
Oakland .....	10	6	5	16	15	15
Philadelphia .....	25	34	16	59	38	38
St. Louis .....	11	10	17	21	35	35
Salt Lake City .....	5	4	3	9	8	8
San Diego .....	8	5	1	13	5	5
San Francisco .....	8	7	2	15	22	22
Seattle .....	6	13	4	19	7	7
Spokane .....	0	7	0	7	1	1



**American Neisserian Medical Society Meeting.**—The third annual meeting of the American Neisserian Medical Society will be held on June 8, 1937, in the Senator, Atlantic City.

The program will consist of papers and discussions on the various phases of the management and control of gonorrhea. All who are interested are cordially invited to be present.

The meeting will begin promptly at 10:00 a. m., and will continue through the day. Additional information may be secured from Oscar F. Cox, Jr., M. D., secretary, 113 Bay State Road, Boston, Mass.

**Social Security Taxes Now Being Paid.**—The federal tax returns required by Title VIII of the Social Security Act are now being filed at a satisfactory rate in the offices of the sixty-four collectors of internal revenue. Commissioner of Internal Revenue Guy T. Helvering recently announced. The commissioner calls attention to the fact, however, that some misunderstanding evidently exists on the part of many taxpayers as to the place to which the returns should be sent and the payments made.

Each employer should file his return on Form SS-1 with the Collector of Internal Revenue for the district in which is located his principal place of business. If the employer has no principal place of business in the United States he should file his return with the Collector of Internal Revenue, Baltimore, Maryland. The tax must be paid at the time the return is filed. Checks, drafts or money orders in payment of these taxes should be made payable to the Collector of Internal Revenue.

Title VIII of the Social Security Act, approved August 14, 1935, imposes an excise tax upon employers and an income tax upon their employees measured by the amount of wages paid on and after January 1, 1937, with respect to employment on and after that date. The rate of each tax for the years 1937, 1938 and 1939 is 1 per cent of the wages paid. The law provides that the employer shall collect the employee's tax by deducting the amount of such tax from the wages as and when paid. The returns now being filed on Internal Revenue Form SS-1 cover the month of January, 1937. Every employer who, during any calendar month beginning after December 31, 1936, employs one or more individuals in a business not specifically exempt from the tax is required to make a return on Form SS-1. The returns for the month of January, 1937, must be filed not later than the end of February.

The taxes imposed by Title VIII of the Social Security Act have created a new class of federal taxpayers, many thousands of whom have heretofore had no occasion to send tax returns and payments to the various internal revenue collectors. This, no doubt, accounts for the fact that some misunderstanding exists on the part of a portion of these taxpayers in regard to meeting their obligations to the Government under the Social Security Act. Some of the returns and moneys are being sent to the Social Security Board at Washington and some of the taxpayers are making their returns to the various field offices of the Social Security Board, while still others have sent their returns and remittances to the Bureau of Internal Revenue at Washington. The Bureau of Internal Revenue states that every possible effort is being made to refer the returns and moneys promptly to the appropriate collectors of internal revenue, where the moneys will be deposited in the designated depository banks and the returns listed for assessment. It is expected that before the end of the month more than two million returns will have been received in the sixty-four collectors' offices.

Prior to the effective date of the taxes, the sixty-four collectors of internal revenue located throughout the United States compiled lists of the persons and firms apparently subject to the tax and distributed blank returns to them. All possible efforts were made to place a blank in the possession of every potential taxpayer. However, it was explained by the Bureau of Internal Revenue that failure to receive a blank return form did not excuse a taxpayer for failure to file his return and pay the tax on time. Any person liable for the tax who failed to receive a form may secure a blank by making a request upon the Collector of Internal Revenue for his district. The law provides penalties both for delinquency in filing the return and for failure to pay within the required time.

**Pacific Coast Society of Obstetrics and Gynecology.** The next meeting of the Pacific Coast Society of Obstetrics and Gynecology will be held at San Francisco, November 3 to 6, at the Fairmont Hotel.

**Menninger Clinic.**—Guest speakers at the third annual postgraduate course on Neuropsychiatry in General Practice, April 19 to 24, inclusive, at the Menninger Clinic, Topeka, Kansas, will be:

Dr. Franklin G. Ebaugh, Denver, Colo., professor of psychiatry, University of Colorado Medical School; director of Colorado Psychopathic Hospital; director, division of psychiatric education, National Committee for Mental Hygiene.

Dr. Winchell McK. Craig, Rochester, Minn., of the Section on Neurology, surgical, the Mayo Clinic; associate professor of neurosurgery, University of Minnesota, graduate School of Medicine.

Dr. J. W. Kernohan, Rochester, Minn., pathologist to the Mayo Clinic; associate professor of pathology, University of Minnesota.

**Automobile Accident Experience.**—Many odd and surprising facts about America's automobile accident experience in 1936 are revealed in a new booklet entitled, "You Bet Your Life," just issued by the Travelers Insurance Company of Hartford, Connecticut. By comparing the hazards of traffic with some of the common forms of gambling, the editors have put forth a clever argument against reckless driving and walking.

The traffic gambler, the booklet points out, is eleven times as likely to be killed or injured in an automobile accident as the holder of a sweepstakes ticket is to win even a small prize. He is thirty-two times as likely to be killed on the highways as the holder of a sweepstakes ticket is to collect a major prize.

The pedestrian who risks all the remaining minutes of his life to save a single minute by crossing the street in the middle of the block, the record shows, is as foolish as the man who would bet seventeen million dollars against one dollar that he could toss a booklet into the air and catch it as it falls. He probably would win, but the small gain would not be worth the tremendous risk. . . .

After analyzing reports of 36,800 fatalities and 967,840 injuries in traffic accidents last year, the company's statisticians point to these interesting and little-known facts about accidents:

Nearly 94 per cent of drivers involved in fatal accidents are male and only 6 per cent female. It does not necessarily follow that women are safer drivers than men, they carefully point out, because adequate data on the relative exposure are lacking.

More than 97 per cent of drivers involved in fatal accidents have had one or more years' driving experience.

More than 75 per cent of all fatal accidents occur when the road is dry. More than 85 per cent of all fatal accidents occur in clear weather.

Saturday was the most dangerous day for driving in 1936, and Tuesday was the safest. In 1935, the fewest number of accidents occurred on Wednesday. More persons were killed last year between seven and eight o'clock in the evening than at any other hour, but the heaviest injury toll came between five and six o'clock in the afternoon.

About 60 per cent of the fatalities occurred during the hours of darkness, when there was only about 25 per cent of the total traffic on the road.

Nearly 80 per cent of the total vehicles involved in fatal accidents were passenger cars.

More than 93 per cent of all vehicles involved in fatal accidents were in apparently good condition when the accident occurred.

The number of Americans killed in traffic accidents during the last fifteen years exceeds by a wide margin the number of Americans killed in action or died of wounds during all the wars in which the nation has ever engaged.

Single copies or quantities of the booklet for club and school use may be obtained gratis by writing the company or any of its agents.

**Qualifying Certificate (Basic Science) References.\***

A list of reports on qualifying certificate laws, printed in CALIFORNIA AND WESTERN MEDICINE, is as follows:

Vol. 32, No. 4, April, 1930, page 288. One hundred and eighty-sixth meeting of the Council of the California Medical Association. Item 30, Medical Practice Act and Basic Science Act.

Vol. 32, No. 6, June, 1930, page 430. Report of Special Committee on Revision of Medical Practice Act and of a Possible Basic Science Act.

Vol. 34, No. 6, June, 1931, page 448. Report of Special Committee on California Medical Practice Act and on a Proposed Qualifying Certificate (So-Called Basic Science) Law.

Vol. 35, No. 3, September, 1931, page 228. Editorial.

Vol. 35, No. 3, September, 1931, page 239. Miscellany.

Vol. 36, No. 2, February, 1932, page 128. Report of Special Committee on Medical Practice Act and on Qualifying Certificate (So-Called Basic Science) Law.

Vol. 36, No. 6, June, 1932, page 439. Report of Special Committee on California Medical Practice Act and on a Qualifying Certificate (So-Called Basic Science) Law.

Vol. 41, No. 5, November, 1934, page 339.

Vol. 42, No. 1, January, 1935, pages 39 and 53.

Vol. 43, No. 4, October, 1935, page 304.

Vol. 43, No. 5, November, 1935, page 321. Editorial.

Vol. 43, No. 6, December, 1935, page 395. Editorial.

Vol. 44, No. 1, January, 1936, page 2. Editorial.

Vol. 44, No. 4, April, 1936, page 252. Editorial.

Vol. 44, No. 4, April, 1936, page 349. Special Article.

Vol. 45, No. 3, September, 1936, page 218. Editorial.

Vol. 46, No. 1, January, 1937, page 4. Editorial.

**Financial Statement of State Compensation Insurance Fund.**—Commissioner Frank C. MacDonald reported the following financial statement of the State Compensation Insurance Fund, which is conducted under the supervision of the Industrial Accident Commission of California:

During 1936, the premiums written by the State Compensation Insurance Fund amounted to \$8,244,000. This is the largest volume ever written by the Fund, and exceeds the next highest year, which was 1930, by \$500,000. The increase in premiums for 1936 over 1935 was \$1,700,000 or 26 per cent. This is the largest amount that any year has ever increased over any previous year. It is an increase of nearly 100 per cent in volume of business over 1933.

The reserves for compensation payments and expense, which are held for the protection of injured workmen and their dependents, have been increased to over \$8,200,000, an increase over December 31, 1935, of over \$1,200,000. There has been a corresponding increase in investment of funds to take care of these reserves. The total assets of the Fund have increased to \$13,491,000, the largest in its history.

Over \$1,000,000 is maintained in cash and short-term U. S. Treasury notes, and \$11,620,000 are invested in bonds, which are legal for savings banks in California. Of this amount, \$2,265,000 is invested in bonds of the State of California and \$5,921,000 in bonds of municipalities and other public agencies of California. Thus, over \$8,000,000 is invested in the obligations of California governmental units, all of the highest rating.

The underwriting exhibit is one of the best in the Fund's history. The financial statement for 1936 shows a loss ratio of 60.50 per cent, and an expense ratio of 14.17 per cent. This expense ratio is the lowest of any compensation insurance company in California, as most California companies have an expense ratio of approximately 40.6 per cent.

The dividends declared by the Fund on policies issued during 1935 have been increased substantially over those on 1934 and immediately preceding years of issue. It is anticipated that on 1935 year of issue policies the dividends will exceed \$2,000,000, the largest amount ever paid on any one year of issue. The excellent underwriting results during the 1936 calendar year indicate that the Fund will be able to maintain the same substantial return to policyholders on policies issued during 1936.

\* See also Report of Special Committee on Qualifying Certificate Act in Supplement of this issue (Pre-Convention Bulletin section), page 54.

**Lectures on Medical History of California.**—The Division of Medical History of the University of California Medical School has arranged a series of talks on the medical history of California, with particular reference to the physicians who were instrumental in founding the University of California Medical School and those who devoted their efforts to building up the various activities of the School. The schedule is as follows, all of the talks being in Toland Hall, University Hospital, at 8 p.m.

Thursday, March 25—Dr. Henry Harris, "How the site of the University of California Medical School was chosen."

Wednesday, March 31—Dr. E. L. Gilcreest, "Toland."

Wednesday, April 7—Dr. R. T. Legge, "McLean."

Wednesday, April 14—Dr. W. I. Terry, "Huntington."

Wednesday, April 21—Dr. C. D. Leake, "Blake."

Wednesday, April 28—Dr. H. C. Moffitt, "William Watt Kerr."

The medical profession and all others interested are cordially invited to attend these talks.

**Botulism in California.**—During 1934 there were six cases, with six deaths, while in 1935 there were twenty cases, with only seven deaths. During the first six months of 1936 only one case occurred. Home-prepared products were involved, the products being home-canned mushrooms, home-prepared soy bean paste, home-canned string beans, home-canned corn and home-made cheese; in one instance either home-canned corn or salmon. In one outbreak an imported commercial canned antipasto was incriminated; however, it could not be confirmed bacteriologically.

A few of the outbreaks deserve particular attention. Three members of a family ate home-made cheese, all developing typical symptoms, one ending fatally. The preparation of the cheese was very significant. It was made in a large ten-gallon earthen crock. The top of the crock was covered with a cloth, a hole dug in the ground and the crock buried bottom up, where it remained six to eight months before being dug up and portions of it eaten. The portion in contact with the soil was found to contain large quantities of *Cl. botulinus*, while the bottom of the jar was free from contamination—the cheese having a uniform yellow color.

The largest outbreak involved ten cases, with three deaths. Epidemiologically, a salad containing an imported antipasto seemed to be the most likely food product; however, the laboratory recovered *Cl. botulinus* out of a partially used jar of home-canned mushrooms found on the premises. This jar was not supposed to have been used by any of the victims of the outbreak.

**Children's Books Help Out Doctors at University of California Hospital.**

—There is nothing in any record to show that Little Red Riding Hood, Old King Cole or other Mother Goose characters went around carrying surgeon's scalpels or rolls of bandages. But there is considerable evidence to show that these worthy characters are taken into consultation by the doctors in the children's wards in the University of California Hospital while the little patients are on the road to recovery, and, to say the least, they have been a big help in taking the minds of the children off both their physical and their mental ailments.

A study of the situation made by Clifton E. Brooks, a graduate of the University, reveals that there is nothing more effective in subduing restlessness and peevishness in long periods of convalescence than well-written and entertaining children's books. As there are many children passing through the hospital whose parents are unable to supply this need, Brooks makes the plea that the public at large, and particularly the alumni of the University, send in as many Mother Goose and other books as possible.

"One of the most important departments of the hospital and the School of Medicine is that of pediatrics, the treatment of children's diseases," Brooks says, in a message to the alumni. "In this department are many chronic cases of diabetes and heart ailments. There are also many cases of convalescence from various acute conditions, all of which require quiet rest in bed. All parents know how extremely difficult it is to keep quiet an ailing or convalescent child without some well-selected aid in the shape of an entertaining book to keep his mind occupied."

**Typhoid Fever in 1934-1935.**—In 1934 there were 626 cases of typhoid fever in California with 80 deaths, and in 1935, 534 cases with 75 deaths. Practically all of these were sporadic cases, no major epidemic being reported. In the spring of 1936 a very interesting outbreak, involving twenty-nine cases, occurred in a small community in the Sacramento delta region. Investigation proved this outbreak to have been water-borne. The water supply was from a deep, drilled well, the casing of which had rusted through about three feet below ground level, permitting water to seep in. This seepage water was heavily polluted. It was found that a twelve-inch sewer line passed within a few feet of the well, and every joint leaked. Heavy rainfall raised the ground water level and allowed sewage-polluted water to pass through the well casing into the well. When a new supply of water was furnished, the outbreak subsided.

**Diseases Greatly Affect History of Peoples, Nations.**—Nations and races, since the remotest times, have been profoundly affected by epidemics and long-prevailing diseases, according to Dr. Alfred C. Reed, professor of tropical medicine at the University of California.

Doctor Reed's theory that epidemic and endemic diseases have helped greatly to shape the history of certain regions and peoples is expressed in the March issue of the *Scientific Monthly*.

The history of the plague, says Doctor Reed, is particularly interesting. For example, in the fifth century B. C. it swept through Athens, so weakening the Attic manpower that Athens was later beaten in battle at Syracuse and the road paved for the fall of the Golden Age of Greece. Such diseases as typhus, cholera, yellow fever, smallpox, and measles have been particularly deadly. Influenza, in 1918-1919, added its name to the list of great epidemic diseases.

Unlike the plagues, which rage for a certain period of time and then vanish without leaving lasting social scars, the so-called endemic diseases cause the steady deterioration of the populations on which they prey. Malaria, alone, says Doctor Reed, has supplied countless examples of the racial weakening and inefficiency which such diseases bring. Other examples, according to the author, are leprosy, which was a great problem in fourteenth century Europe, and is now increasing in central Africa; sleeping sickness, which has stunted the cultural growth of the African negroes; and syphilis, which has recently become the object of a world-wide medical offensive.

**Association of Western Hospitals.**—The Association of Western Hospitals announces the preview of the 1937 convention program:

The eleventh annual convention and display of exhibits of the Association of Western Hospitals, the Association of California Hospitals, the western conferences of the Catholic Hospital Association, and allied groups and sections, will be held April 12-15, Biltmore Hotel, Los Angeles.

The theme of the convention this year is: *Hospital Service Is a Profession—How Well Do We Carry Out Its Traditions?*

To effect this theme, the Program Committee has planned a concentrated study of some of the major hospital problems. This study will be conducted under the leadership of competent, colorful authorities, with opportunity for pertinent questioning and discussion. The responsibilities of hospitals to the public, to the patient, to the employees, will be stressed throughout the convention.

The Program Committee is planning fewer and better speeches, more and better discussions. General assemblies, scheduled without conflict from other sessions, will be held twice daily. In each of these sessions, you will hear an able speaker, one chosen for knowledge of the subject, ability to deliver his message, and for courage to tell the truth, even though it startles.

Periods for discussions will be provided after each major session. They will be led by competent chairmen, assisted by discussants chosen for special knowledge of the subject.

A convention program, filled but not crowded! The committee is confident you will like it. Do not miss it!

**Human Voice Put Under Microscope at Medical School.**—An actual demonstration of how the human voice may be studied under the microscope as an aid in both the detection and the treatment of certain diseases was recently given by Dr. Paul Moses, lecturer in voice and speech defects in the University of California Medical School, in a series of lectures at the School.

**Vacancies on Medical Staffs in State Institutions.**—Opportunities for physicians to enter the California State service were given a boost on March 9, 1937, when the State Personnel Board announced examinations for four positions at salaries of \$200 per month plus living costs for each doctor and his family, and another position at \$100 per month plus living costs. The positions were all in institutions operated by the State.

Applications to take the examinations must be filed with the State Personnel Board in Sacramento. Residence requirements for these positions have been set aside by the State Personnel Board, and applications will be received from physicians who are not residents of the State of California.

**University of California Medical School Had Medical Program for Charter Week.**—The University of California Medical School has prepared a notable program as its part in the Charter Week observance of the University, and has invited all members of the medical profession to participate, whether they are graduates of the University or not. The program was carried out on Wednesday, March 24, and consisted of operative clinics, lectures on late developments in both medicine and surgery and the annual dinner of the University of California Medical School Alumni Association, which was held at the Bohemian Club. This dinner was addressed by Dr. Monroe E. Deutsch, vice-president and provost of the University and Dr. Herbert C. Moffitt, clinical professor of medicine.

**Vaccination of Cattle Against Bang's Disease: Still Experimental.**—The vaccination of cattle against Bang's disease during calfhood is a promising means of combating this serious cattle malady, says Dr. J. R. Mohler, chief of the Bureau of Animal Industry, United States Department of Agriculture. "Yet," he cautions, "this procedure is still in the experimental stage and livestock owners hesitate to place faith in claims that promise more than scientific findings to date warrant."

To correct erroneous and misleading statements that have come to its attention regarding vaccination for Bang's disease, the Bureau summarizes present scientific knowledge on this subject:

The Bureau's investigators have found a vaccine prepared with a *Brucella abortus* strain of low virulence, and used only on calves between 4 and 8 months old, to be an encouraging means of coping with Bang's disease. Calves have appeared to be more resistant than mature unbred animals to the vaccinal infection, and the agglutination reactions induced by the vaccine injections have given indication of being of shorter duration in calves than in unbred heifers of near breeding age or in unbred cows. . . .

The Bureau of Animal Industry is cooperating with about 250 herd owners in different states in a calfhood-vaccination experiment on farms where 15 per cent or more cattle have reacted to the Bang's disease test. It is proposed to continue this experiment until such time as all cattle in these herds will be those that were vaccinated when calves.

**Unification of Medical Curriculum Deemed Desirable.** Medical education has become too specialized and standardized, and medical educators are too prone to teach individual divisions of medical science and practice without regard for their relationship to the whole.

This statement of the late Williams McKim Marriott, M.D., dean of the University of California Medical School, has been reprinted from the *Southern Medical Journal*.

Medical schools, said the late dean, depend too much on the ability of the student to organize the material which



is given him in class. The component parts of a good medical education are given him, but little attempt is made by the faculty to make him realize their relation to the whole.

It would be better, said Doctor Marriott, if, from the very start of the course, the student could have before him some picture of the complete medical education. The curriculum of the medical school should be so coordinated that each separate subject would be taught not as an isolated branch, but as part of a central idea.

There should be no break between preclinical and clinical instruction, according to the article. The study of medical sciences should be continued while clinical study is being carried on.

The unification of the curriculum, said Doctor Marriott, would necessarily mean the breaking down of some department lines and a mingling of the members of the departments. Frequent symposiums and comprehensive examination in which many branches of medical science are treated would be represented would be beneficial.

## LETTERS

### Concerning ownership of x-ray plates.

San Francisco, March 10, 1937.

To the Editor:—Inasmuch as there is now pending before the California Legislature numerous bills for the regulation of the practice of medicine, I believe it timely to call to the attention of my colleagues the following case. Within the last ten or more years the atmosphere has become so charged with court actions against the physician and surgeon that every act of the profession is an excuse for legal procedure.

The action brought against me was by husband and wife, both of whom had been patients for which both medical and surgical services had been rendered. They demanded recovery of x-ray films, laboratory reports, and damages of \$1,250. These reports they asked be turned over to them for possession, refusing the offer made by me that I would allow any physician to whom they wished to go subsequently, the opportunity to see and obtain all information in my hands.

The case was heard in the municipal court of Judge Alfred J. Fritz, San Francisco. In deciding this case in favor of the physician, Judge Fritz's decision was as follows: "There are no decisions in the State of California on the point, and the only case in the United States that counsel for either side have been able to find is that of *McGarry vs. J. A. Mercier Co.*, decided by the Supreme Court of Michigan on September 9, 1935, and appearing in Volume 262, N. W. Reporter, at page 296, which was concurred in by the entire bench."

In that case, Judge Fritz quotes in part from the opinion of the court, as follows:

In the absence of agreement to the contrary, such negatives are the property of the physician or surgeon who made them incident to treating a patient. It is a matter of common knowledge that x-ray negatives are practically meaningless to the ordinary laymen. But their retention by the physician or surgeon constitutes an important part of his clinical record in the particular case, and in the aggregate these negatives may embody and preserve much of value incident to a physician's or surgeon's experience. They are as much a part of the history of the case as any other case record made by a physician or surgeon. In a sense they differ little, if at all, from microscopic slides of tissue made in the course of diagnosis or treating a patient, but it would hardly be claimed that such slides were the property of the patient. Also, in the event of a malpractice suit against a physician or surgeon, the x-ray negatives which he has caused to be taken and preserved incident to treating the patient might often constitute the unimpeachable evidence which would fully justify the treatment of which the patient was complaining. In the absence of an agreement to the contrary, there is every good reason for holding that x-rays are the property of the physician or surgeon rather than of the patient . . . who employed such phy-

sician or surgeon, notwithstanding the cost of taking the x-rays was charged to the patient . . . while not fully to the point, it has been indicated by court decisions that the negatives of an ordinary photograph, in the absence of an agreement otherwise, belongs to the operating photographer, though his use thereof may be restricted.

This case and decision will undoubtedly set a precedent in the State of California. I believe that through closer cooperation between the two great organizations, Law and Medicine, in this State as well as throughout the United States, much could be accomplished to establish a better understanding and in this way there might be a marked decrease in all types of court actions against the physician and surgeon. These have become all too frequent, especially in our own locality. The increase of our protection rates bears witness to this fact.

516 Sutter Street.

ROBERT A. OSTEROFF, M.D.

### Concerning recent appointments to State Board of Medical Examiners.

The following letter was sent to Governor Frank Merriam by Dr. William R. Molony, President of the State Board of Medical Examiners:

Los Angeles, California,  
March 5, 1937.

Hon. Frank Merriam  
Governor of the State of California  
Sacramento, California  
Dear Governor:

I want to thank you for your very cordial expression of confidence in the Board of Medical Examiners as shown in your recent reappointment of Doctors Charles E. Schoff and William H. Geistweit, Jr. These physicians have served with distinction and have rendered valuable service to the people of California as members of the Board of Medical Examiners.

The medical profession of this State join with me in expressing to you their gratitude and thanks for making it possible to retain these two splendid doctors upon the board.

May I take this opportunity also to tell you of the splendid and worth while service and cooperation shown to the Board of Medical Examiners and the profession of this State by Mr. William G. Bonelli. It is indeed a great pleasure to have associated with us as the Director of Vocational Standards such a fine, understanding and sympathetic person as found in Mr. Bonelli.

I am very cordially yours,

WILLIAM R. MOLONY.

### Concerning May Day—Child Health Day, 1937.

The following letters explain themselves:

U. S. DEPARTMENT OF LABOR  
CHILDREN'S BUREAU  
WASHINGTON

February 20, 1937.

Dr. George Kress, Editor  
CALIFORNIA AND WESTERN MEDICINE  
204 South Broadway  
Los Angeles, California  
My dear Doctor Kress:

Dr. W. W. Bauer, Director, Bureau of Health and Public Instruction of the American Medical Association, has suggested that we send to you the enclosed Suggestions for the Observance of May Day—Child Health Day, 1937, with the request that you give same notice of it in your State medical journal.

As you will notice, the State health officer appoints a May Day chairman for each State, who is usually the director of the division of maternal and child health in the State Department of Public Health. If you can give space for an article on child health in your April or May issue, the director of that division will probably be glad to supply you with information on child health in your State to include in the article.

We will appreciate whatever you find it possible to do to emphasize the importance of "Health Protection for Every Child" in connection with May Day—Child Health Day, 1937.

Sincerely yours,

MARTHA M. ELIOT, M.D.  
Assistant Chief.



U. S. DEPARTMENT OF LABOR  
CHILDREN'S BUREAU  
WASHINGTON

May Day—Child Health Day, 1937  
Saturday, May 1

Suggestions for Observance

The Children's Bureau sponsors May Day—Child Health Day activities at the request of the State and Provincial Health Authorities of North America and in accordance with the Congressional Resolution of May 18, 1928, authorizing the President to proclaim May Day as Child Health Day.

Slogan: Health protection for every child.

Objective: To promote the extension of year-round child health services in every community, including services for physically handicapped children.

Leadership: State May Day chairmen will be appointed by State health officers to plan the State Child Health Day program and to arrange for the cooperation of organizations concerned with child health.

State departments of education will be asked to cooperate by planning and directing school Child Health Day programs.

Program: For community groups: (1) an evaluation of child health services in the community based on a survey of existing child health conditions and organization to promote child health, (2) the launching of new local child health projects, and (3) exhibits or programs celebrating gains made.

For children: As a climax for the year's health program—festivals, athletic contests, programs, exhibits celebrating children's growth, vigor, and safety from health hazards.

State and local news stories, radio talks, and speeches.

Requests for information on State programs or for further material should be sent to May Day chairmen in State health departments.

KATHARINE F. LENROOT,  
Chief.

## MEDICAL JURISPRUDENCE†

By HARTLEY F. PEART, ESQ.  
San Francisco

### Malpractice Liability of an Operating Surgeon for the Negligence of a Nurse Assisting at the Operation

Several years ago a physician performed an operation for the purpose of removing the gall-bladder of a patient in a county hospital. Two nurses employed by the hospital assisted the operating surgeon. One was an instructor of nurses at the hospital; the other had about eighteen months' nursing experience, and this operation was the first time she had been in an operating room to attend an operation of any kind.

Neither nurse counted the number of sponges that were brought into the operating room or the number that were used and thrown into the receptacle after use. The operating surgeon later testified that an announcement was made by someone that the sponge count was correct; that he viewed the field of operation, saw no sponges, and closed the incision.

Unfortunately, a sponge remained in the patient's abdomen and she died following a second operation performed to remove the sponge. Within a year a malpractice action was filed against the supervisors of the county and the operating surgeon. Because of the rule of law which grants an immunity to counties for the negligence of officers or employees in county hospitals, the case was dismissed as to the supervisors. (For the law on this point, see CALIFORNIA AND WESTERN MEDICINE, pp. 516-517, December, 1936.)

The case proceeded as against the surgeon alone. Eventually it reached the Supreme Court of this State, where a judgment against the surgeon was upheld on two separate grounds: First, that an operating surgeon is legally responsible for all of the acts or omissions of nurses, no matter by whom employed, assisting in a surgical operation; second, that in a certain type of malpractice case, including sponge cases, the doctrine of *res ipsa*

*loquitur* applies. The phrase *res ipsa loquitur*, when applicable to a malpractice case, means, generally speaking, that it is only necessary for the plaintiff to prove a bad result in order for the case to go to the jury for its verdict. The jury is then entitled to infer from the bad result that the physician or surgeon was guilty of malpractice. The case to which we refer is *Ales vs. Ryan*, 93 Cal. Dec. 18.

Each of the propositions announced by the Court in *Ales vs. Ryan* is of vital importance to practicing physicians and surgeons. In the present article we will discuss the malpractice responsibility of physicians and surgeons for the negligent conduct of nurses employed by a hospital and assisting in the operating room, since the decision in *Ales vs. Ryan*. In a future article the application of the *res ipsa loquitur* doctrine by the Court will be analyzed.

The full extent of the legal responsibility of surgeons as a consequence of the Supreme Court's opinion in *Ales vs. Ryan* may best be illustrated by repeating the words of the Court itself:

The decisions of this state, when they have spoken on the subject, have endorsed the doctrine that *the surgeon is responsible for the acts of the nurse*. . . . The surgeon had the power, and, therefore, the duty to direct the nurse to count the sponges as part of his work in the opening and closing of plaintiff's abdomen, and putting in and taking out of sponges, and it was his responsibility to see that such work was done. He cannot relieve himself of liability by any custom or rule requiring the nurse to count the sponges used and removed. (Italics supplied.)

It may readily be seen that an operating surgeon in this State is now subject to a malpractice action if any of the nurses in the operating room negligently perform an act or negligently fail to do something which should have been done.

In *Ales vs. Ryan* the surgeon did not own the hospital at which the operation was performed, and the nurses who assisted him were not in his employ. As far as the surgeon knew, a sponge count was made, because a count was reported to him; also, he made an independent search for sponges. It would seem that the surgeon did all that he could in the circumstances. Yet, the Court held him liable for the negligent act of a nurse, the occurrence of which he could not know without neglecting his own duties. As a consequence of the decision in *Ales vs. Ryan*, it may be said that a surgeon is an insurer in so far as the nurses assisting in the operating room are concerned.

A surgeon who is about to undertake a major operation upon a patient in a county hospital might well pause to reflect upon the position in which he is placed by the statutes and decisions in this State, in the event that one of the nurses, employed by the county and delegated to assist him, should, unfortunately, be guilty of a mistake. In the first place, the nurse's employer, the county, cannot even be sued by the patient. In the second place, the operating surgeon is responsible for the nurse's mistake, even if it is of such a nature that he could not have prevented it or remedied it after its occurrence.

In Wyoming the rule is different. The same problem was recently presented to the Supreme Court of that state in the case of *Jackson vs. Hansard*, 17 Pac. (2nd) 659. The Wyoming Court came to the conclusion that an operating surgeon is not entitled to rely exclusively upon the nurse's sponge count, but that he could not be held liable, if he used ordinary care to verify the nurse's count, for example, by an independent investigation.

The principle of law which prevails in Wyoming and in a number of other states is as follows:

While a surgeon performing an operation cannot, ordinarily, be held responsible for the negligence of somebody else, it is his duty, we think, to exercise reasonable care in seeing that no foreign substances which ought to be removed are left in the body, and this duty was in fact, recognized by the defendant in giving his testimony. He should not, we think, ordinarily at least, be able to relieve himself of liability for injury to a patient caused by sponges or pads, by an exclusive reliance on a custom or rule requiring the attendant nurse to count the sponges or pads used and removed, and on his nurse's statement as to the count. On the other hand, he cannot be held responsible for the exercise of more than ordinary care. *He is not an insurer against mishaps*. . . .

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, containing copy submitted by Hartley F. Peart, Esq., will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

## SPECIAL ARTICLES

### COCCIDIOIDAL GRANULOMA IN CALIFORNIA IN 1934-1935

Since the publication of Special Bulletin No. 57 by the California State Department of Public Health in 1931 nothing further has been reported on coccidioidal granuloma. This report will serve to revive and bring the data up to date (July 1, 1936).

The general trend of the epidemiology of this disease remains the same as discussed in the Special Bulletin.

Four hundred and fifty cases with two hundred and twenty-four deaths were recorded to July 1, 1936. Table 1 is a tabulation of the cases and deaths by years:

TABLE 1.—Distribution of Coccidioidal Granuloma in California Cases and Deaths by Years

Year	Cases	Deaths
Prior to 1928	151	86
1928	36	10
1929	46	25
1930	22	11
1931	19	8
1932	19	9
1933	54	25
1934	49	29
1935	28	14
1936 to July 1	26	7
Totals	450	224

Geographically these cases are distributed according to Table 2. The concentration of cases still persists in central and southern California. Three hundred and one cases, or 66.8 per cent, of the four hundred and fifty cases recorded are from Fresno, Kern, Kings, Tulare, and Los Angeles counties.

The northern rural counties have never reported cases, and it would appear that the disease has certain geographic limits. Since the first large group of cases were reported (prior to 1928) from San Francisco as a medical diagnostic center, only eight cases have been recorded in nine years. Other cases which have been diagnosed in San Francisco have been transferred to the home address or to the most probable source of infection obtained from the detailed history.

A study of the cases according to age and sex (see Table 3) shows that males are the most often affected with 384, or 85 per cent, of the 450 cases occurring in this sex. Sixty-one cases, or 13.3 per cent, are recorded in females and five were of unknown sex. Three cases have been reported under one year of age, and seventeen cases (3.7 per cent) in the one to four age group. However, the majority fall in the higher age groups with a total of 275 cases, or 61 per cent, occurring between the ages of twenty-five and fifty-five years.

TABLE 2.—Sex and Age

Age	Male	Female	Unknown	Total
0-1	1	2	—	3
1-4	13	3	1	17
5-9	10	4	—	14
10-14	5	2	—	7
15-19	17	4	—	21
20-24	45	11	—	56
25-34	129	15	—	144
35-44	80	7	—	87
45-54	40	4	—	44
55+	30	8	—	38
A.	13	1	—	14
Unknown	1	—	4	5
Totals	384	61	5	450

Table 4 is a summary of cases according to occupation and sex. The occupations were grouped under the general headings: soil, vegetation, animals, general labor (when no specific type was noted), laboratory infection, and miscellaneous. The latter group included professionals (students) commercial business, mechanical trades, building trades, and others. Two other groups were listed, *i. e.*, unknown occupations and no occupation. Under the heading vegetation was included housewives—since their work brought them into close contact with fruits and vegetables. Seventy-eight patients were found to have work pertaining to the soil; one hundred and one with fruits, vegetables, cotton and other vegetation; one hun-

dred were general laborers; one hundred and sixteen cases were grouped under the miscellaneous heading; twenty-nine were of unknown occupation; and nine had no occupation.

Sixty-five and five-tenths per cent of the cases were found in the groups involving outside work or work involving soil, vegetations, animals, and general outdoor labor. The epidemiology theory that the disease is soil-borne, as expressed by the high percentage of male outdoor workers, has been proved correct since Stewart and Meyer isolated the fungus (*Coccidioides immitis*) from soil samples collected in Kern County.

TABLE 3.—Occupation

Type	Male	Female	Unknown	Total
Soil (oil, mines)	78	0	0	78
Vegetation (housework)	64	37	0	101
Animals	16	0	0	16
General laborer	100	0	0	100
Laboratory	1	0	0	1
Miscellaneous:				
Professions and school	21	6	0	27
Children	25	11	1	37
Commercial business	5	1	0	6
Mechanics	19	0	0	19
Building trades	12	0	0	12
Others	12	3	0	15
Unknown occupation	24	1	4	29
No occupation	7	2	0	9
Totals	384	61	5	450

The cases are tabulated in Table 4 according to nationality, with number and percentage given. Practically all races are affected and the per cents for each have remained quite constant since the first tabulation in 1931. There are, however, variations, *i. e.*, the foreign-born whites have decreased slightly, whereas the percentage of cases among Filipinos has doubled during the past five years. The explanation of this increase is not evident from the epidemiological histories. Occupation probably plays a part, as the majority of Filipinos in California are engaged in agricultural work in localities where the highest percentage of cases occurs.

It has been noted that when the medical profession becomes interested in a particular disease, then the morbidity reports increase. This undoubtedly has had an influence on the increase in the number of cases of coccidioidal granuloma reported.

Early diagnosis of pulmonary cases and differential diagnosis from tuberculosis by sputum examination have been important steps during the last few years.

TABLE 4.—Nationality

Nationality	Number	Per Cent
American (white)	135	30.00
Mexican	96	21.33
Filipino	67	14.90
Negro	61	13.60
Foreign born (white)	36	8.00
Japanese	9	2.00
Chinese	8	1.80
Portuguese	8	1.80
Hindu	4	.89
Indian	3	.66
East Indian	1	.22
Malay.	2	.44
Unknown	20	4.44
Totals	450	100.00

### PRESIDENT'S PERPETUAL BRIDGE TROPHY: LOS ANGELES COUNTY MEDICAL ASSOCIATION

By ARTHUR E. SMITH, M.D., D.D.S.  
Los Angeles

During July, 1936, Dr. Harlan Shoemaker, then president of the Los Angeles County Medical Association, appointed a committee, consisting of Doctors S. M. Alter, Charles E. Phillips, and E. Eric Larson, to organize a bridge tournament, to be held at intervals at the Association's headquarters during the remainder of the year. At the end of that time, appropriate prizes were to be given to the winning participants.

The sessions were held every two weeks for ten weeks. About sixty members played at the first session, most of whom continued throughout the whole period.

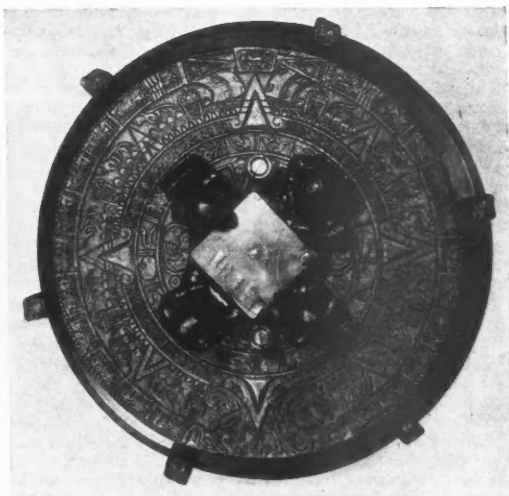
The players were divided into two sections: the recognized good players were placed in the North and South positions, and those who felt they were not the best of players occupied the East and West positions. At the end of each session the points were tabulated, and there was great rivalry between the members of each section as to their position on the tabulated lists.

Within a short time following the organization of the medical bridge tournament, Doctor Shoemaker came to my office with a copy of the November, 1936, issue of the *National Geographic Magazine*, and approached me, saying, "Arthur, I've got an idea that I want to explain to you. It is my desire to present a prize to the winner of the bridge tournament, and I have been racking my brain to evolve something unusual, something different from the time-worn reward of a cup. I have really remained awake night after night, giving the matter much thought, and at last I conceived the idea of making a trophy, utilizing the Calendario Azteca as a support for a miniature bridge table, chairs and players, and you have been chosen to design and sculpture such a trophy." Doctor Shoemaker was advised that I would consider the production of such a trophy and would confer with him later.

The very next afternoon, however, and before I had considered such a tremendous undertaking, he returned to my office, saying: "I have another idea for the trophy." He explained that he would like to have carved reproductions of the emblematic Mayan feathered serpents, which guard the Temple of Warriors, Chichen Itza, incorporated in the trophy. Inasmuch as I had only read about the feathered serpents, I was bewildered in creating models of them. With the above explanation, Doctor Shoemaker departed, leaving me in amazement with his words, "Now you produce the trophy!" I had nothing to guide me or use—all had to be reproduced, designed and sculptured from photographs that, as yet, we did not have.

It was less than five months until the bridge tournament ended, when the trophy would be presented to the winner. This was a very short space of time to complete such a detailed art production, and I quite realized that midnight oil must be burned if this unique creation were to be born. It was not fully completed the evening it was presented, and since that date many additional hours have been spent to complete it. Approximately four hundred hours were taken in its production.

Much time and effort was necessary to secure the necessary data, photographs, etc., to start the designing and



This photograph of the trophy was taken from above, looking downward, and shows a bridge game in progress. Note the carved Calendario Azteca, cards, score pad, pencil, cigarettes, and cigar stand.

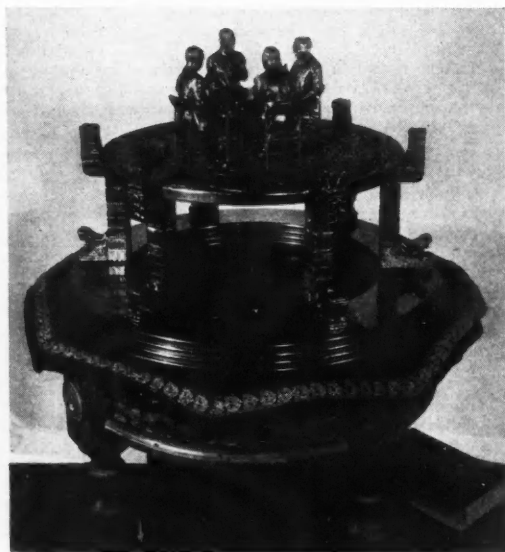
modeling. A plaque or copy of the Calendario Azteca could not be found in Los Angeles. After wiring a friend in Mexico City, a small picture of the Calendario was secured. Books on Mexican art were borrowed from Dr. Elmer A. Belt, which gave considerable data on the Calendario, but models or copies of the feathered serpents could be located in Los Angeles. Some books were secured from the Public Library which gave data and history of the feathered serpents; and after considerable study it was decided that the trophy should consist of four distinct parts: a base designed from Mayan steps leading to Caracol; six legs of feathered serpent design; a disk to support the tableau designed from the Calendario Azteca, and a tableau depicting an actual scene during a game of bridge.

After obtaining the above-mentioned data, the next step was to decide on the size of the trophy. The size of the players in miniature, bridge table, chairs, etc., had to be considered from the standpoint of sculpturing. A one-eighth to one-inch scale was decided upon.

The first step in production was to make the Calendario. A photograph was taken from the illustration sent from Mexico City, and then an eighteen-inch enlargement was made, and after that an eighteen-inch copper disk, upon which, with scribing tools, the hieroglyphics from the photograph of the Calendario were outlined in minute detail. When this was completed, an impression was taken and a plastic positive model produced; then the detailed outline of the hieroglyphics of the Calendario were reproduced upon the positive plastic model. That done, all the characters were carefully carved in relief. When this was completed, another negative impression was made from which a positive model was produced in artificial marble. (All models comprising the trophy were reproduced in copper and bronze before assembling.)

The next step was to create models of the feathered serpents. Having no model as a guide, we photographed the feathered serpent from the November, 1936, issue of the *National Geographic Magazine*. This photograph was enlarged to the desired size and was used as a guide in carving a model in plastic material. At the completion of the original, impressions were taken and six reproductions were cast in artificial marble which were reproduced later in bronze. These six feathered serpent copies were to support the Calendario and tableau.

For production of the tableau, I photographed four players seated at a bridge table, in informal pose while a bridge game was in session. The players—Doctors Harlan Shoemaker, Charles E. Phillips, Edward C. Pallette, and E. Eric Larson—were photographed from four



The above photograph shows a close-up view of the trophy. Note the base of Mayan design and the six feathered serpent columns supporting the Calendario Azteca upon which rests the tableau.

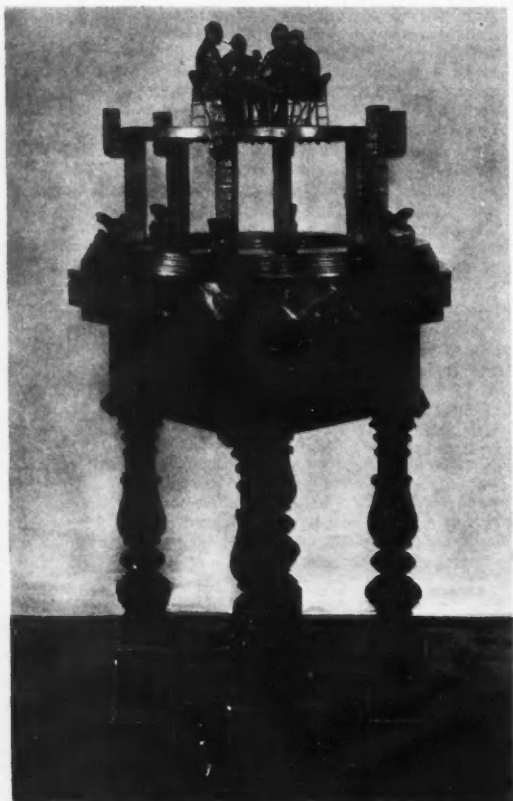
different angles, and each was modeled to scale in clay in his original position. When the players were sculptured, impressions were taken of each miniature and reproductions made in artificial marble and later in bronze. The players were placed in their respective chairs in the exact position that they occupied during the actual bridge game. The score pad, pencil, cigarettes, and pipe were produced in metal on a one-eighth to one-inch scale.

The next step was to produce the bridge table, chairs, and cigar stands. I now conferred with Mr. Cochems, Executive Secretary of the Association, and secured a bridge table, chair, and cigar stand, which were photographed with the players. This equipment was used for the production of the miniature models. Careful measurements were taken and the miniature models were accurately made on a one-eighth to one-inch ratio, from brass and copper. The playing cards were individually cut from thin spring brass, to scale, by the use of a template.

The table, chairs, cigar stands, cards, cigarettes, and the players were now assembled. The next step was to attach the six supporting feathered serpent columns to the Calendario Azteca. These columns occupy equidistant positions. The base, which supports the feathered serpent columns, the Calendario Azteca, and the tableau, is of Mayan design and was created from a photograph of the stone steps leading to the entrance of the Caracol, Chichen Itza. After complete assemblage of the various parts, which comprise the trophy, it was reproduced in copper and bronze.

It will be noted that Doctor Pallette and Doctor Phillips each hold twelve cards; Doctor Shoemaker holds thirteen, and is about to play, while Doctor Larson has spread his cards upon the table.

It will also be observed that Doctor Larson is holding a cigarette between his fingers and is peering very serenely



This photograph displays the trophy at a distance. Note the open mouths of the feathered serpents, and the carved columns.



Calendario Azteca shown in detail. This forms the support for the miniature bridge table and players of the President's Trophy.

through his Harold Lloyd spectacles, with his "britches" pulled up almost to his knees. It will be noted that the expression on Doctor Shoemaker's face is that of deep thought and anxiety to win. Doctor Pallette's cigarette is reposing on the edge of the table and, as usual, his right leg is resting against his abdomen. Doctor Phillips appears nonchalant and is sucking on an old strong pipe, which has been in use for at least twenty years.

A banquet was served on December 23, 1936, after the sessions were completed, and prizes were awarded to the top four players in each section. All prizes, except the honor prize, were given by different firms dealing in medical supplies.

The honor prize was presented by the writer with the following understanding: (1) It is to be known as the President's Perpetual Bridge Trophy. (2) It is to be the property of the Los Angeles County Medical Association. (3) It is to remain on display at the Association's headquarters. (4) The trophy is to be awarded each year to the physician who makes the highest bridge points and his name shall be placed thereon.

The winner for 1936 was Dr. Harold P. Hare, whose name is the first to be engraved upon the trophy.

A description of the Aztec zone is given in the encyclopedias and other volumes. . . .

The following inscription on copper is attached to the trophy:

THE PRESIDENT'S PERPETUAL BRIDGE TROPHY  
Suggested by Harlan Shoemaker, M.D.

President, Los Angeles County Medical Association, 1936  
Reproduced and Sculptured From Photographs

by

Arthur E. Smith, M.D., D.D.S.

The disc of the trophy, upon which tableau rests, is a carved reproduction of the Calendario Azteca. The original is in the museum in Mexico City. It is supported by six carved reproductions of the Mayan feathered serpents, the originals of which guard the Temple of Warriors, in Chichen Itza

North—Charles E. Phillips, M.D.

South—E. Eric Larson, M.D.

East—Edward C. Pallette, M.D.

West—Harlan Shoemaker, M.D.

1930 Wilshire Boulevard.



## SOCIAL HYGIENE—1937 MODEL

### Some Last Year's Events Which Have Helped to Build the Framework for the Coming Year

The whole history of social hygiene is living drama, from the days of Moses' law-giving down to the present sweeping drive for syphilis control, but surely no period has seen more dramatic events and rapid developments than the past twelve months. This has been particularly true as regards public knowledge and cooperation in the campaign against the venereal diseases. At the beginning of 1936 the situation in this respect was much the same as at any time since the World War impetus slackened its force. Comparatively few people recognized syphilis and gonorrhea as widespread infectious diseases. The social hygiene societies and other health agencies battered against a wall of secrecy and indifference which successfully hid the real facts. The great multitude remained unaware of this threat to family and community health, nor knew what to do if the threat became a reality. Many, as always, were suffering the results of their lack of knowledge, without hope for future recovery.

Contrast with that shadowed picture the brilliant scene as the year closed, with health officials and social hygiene executives meeting in Washington at the invitation of Surgeon-General Parran and with the benediction of President Roosevelt, to map a nation-wide fight against syphilis, and asking for \$25,000,000 to provide the sinews of war. Newspapers and news magazines hailed this conference as one of the most important ever held in the United States—gave it front-page space—wrote leading editorials of approving comment. Many of them had been crusading all through the year for such objectives. The thousand conferees, returning to the country's four corners, found that the home folks had kept pace with Washington happenings, knew what was going on. People were reading and talking about syphilis and how to avoid it. More sick people were seeking treatment. Town authorities were appropriating funds for clinics for those who could not afford to pay doctors. All were ready to help conquer this ancient enemy, now smoked out of ambush. Truly, a marvelous change in public attitude to come about in one short year.

What brought about this change? What happened in 1936 to lift the fog of public apathy and indifference, and promise continuing recognition to social hygiene as a vital issue in present-day life? Passing the year's events in review, we note a few "peaks of progress":

Surgeon-General Parran's announced determination to make the prevention and control of syphilis a major objective of the United States Public Health survey program, and the practical efforts of himself and his staff to find ways and means to this end, as witness the "Christmas Conference" mentioned above.

The passage of the Social Security Act, with the provision of funds applicable to venereal disease control through the state and city departments of health, and the resultant developing of new and effective programs in important localities.

The great increase in newspaper cooperation in social hygiene education of the public, led off by special series of articles published by the Chicago *Sunday Tribune* and the New York *Daily News*, and the Washington *Herald*, and followed in the course of the year by similar feature articles in other important newspapers across the country. A few are: the Portland *Oregonian*, San Francisco *News*, Los Angeles *Evening News*, Philadelphia *News*, St. Louis *Post Dispatch*, Dallas *News*, Buffalo *Times*, and Syracuse *Post-Standard*. Aside from these special features, news items and editorials are frequent and informative. Metropolitan dailies, including the New York *Times*, New York *Herald-Tribune*, World-Telegram, *Evening Post*, *Sun*, the Brooklyn *Eagle*, and others, which have been accustomed to speak more or less frankly for some time, have increased their cooperation and are definitely influencing public opinion by thoughtful editorials. Many newspapers in smaller communities, such as the Winston-Salem (N. C.) *Observer* and Evanston (Ill.) *News-Index*, are actively crusading for the establishment or improvement of local treatment facilities.

The similar increase in interest and practical educational help shown by the weekly and monthly standard maga-

zines. Doctor Parran's fine article, "Why Don't We Stamp Out Syphilis," appearing in the July *Survey Graphic*, and condensed in the July *Reader's Digest*, set a new high for reader interest and continued distribution. Seven months after these articles appeared, the publishers and the Association have constant call for reprints, the *Digest* reporting to date a total distribution of nearly 400,000 to all parts of the world. Recent articles in the *Literary Digest*, *Time*, *News-Week*, and other weeklies, are familiar to all, as are the frequent mentions in home magazines like *Ladies' Home Journal*, *Woman's Home Companion*, *Farmer's Wife*, and *Pictorial Review*. *Liberty* has published a number of editorials. *Physical Culture* ran a series of four special articles during the year. Magazines with special articles in preparation for early 1937 publication include *The New York Woman*, *The Forum*, *Parents' Magazine*, and others. Semi-professional publications such as the *National Parent-Teacher*, the *Junior League Magazine*, and *Hygeia*, have published several articles. The many articles in medical journals, publications for nurses and for other professional and technical groups, have indirectly been of great value in promoting public knowledge and interest during the year.

The increased cooperation of large membership groups such as the General Federation of Women's Clubs and the National Council of Women, whose public health committees during 1936 developed definite programs for club cooperation in syphilis control will enlist the interest and effort of millions of women.

The renewed educational efforts of the Metropolitan Life Insurance Company, which during 1936 prepared for publication (in February, 1937) for the third time a statement concerning syphilis, as one of its regular monthly series of full-page magazine advertisements and distributed thousands of reprints of this advertisement and of a new edition of the pamphlet "The Great Imitator," already widely circulated.

The production of the new "talking slide film" "For All Our Sakes," dealing with syphilis, under the sponsorship of the United States Public Health Service and the Association, and the purchase and showing of this production by a large number of health officers and agencies, mercantile, industrial and other concerns among employees and the lay public.

Publication of the report of the Committee on Survey of Research on the *Gonococcus* and *Gonococcal Infections* by the National Research Council and the Association, and a resultant quickening of interest in the possibilities of doing for this prevalent and serious disease as much as has been done for syphilis.

The holding of the fourth annual New York Regional Conference in January, with 2,500 people attending; similar meetings in Syracuse, Buffalo, Rochester, held by local social hygiene committees last fall; Social Hygiene Week, November 1 to 7, sponsored by the Missouri Social Hygiene Association; the month-long educational campaign conducted by the Erie Social Hygiene Association in November and December. Dozens of other conferences, meetings, and sessions held all over the country, by state and local groups and national agencies such as the American Medical Association, the National Conference of Social Work, the American Public Health Association, and the American Hospital Association.

The establishment of numerous new social hygiene committees or societies during 1936, among them:

California—Southern California Association for the Study and Prevention of Syphilis and Gonorrhea, Los Angeles.

Illinois—Social Hygiene Committee, Robinson; Social Hygiene Committee, Council of Social Agencies, Rock Island.

New Jersey—Institute on Marriage and the Home, East Orange.

New York—Social Hygiene Committee, Chautauqua County Tuberculosis and Health Association, Dunkirk; Club for Prevention of Venereal Disease, Middletown.

Ohio—Social Hygiene Committee, Cleveland Health Council, Cleveland.

Washington—Social Hygiene Committee, Tacoma Public Health Council, Tacoma.

These are but a few glimpses of a swiftly moving procession of events, each of which we believe has had its effect in bringing about the great increase noted in public interest and information, and in creating the present favorable outlook for further progress during 1937. Many other factors were involved. A particularly fortunate set of circumstances combined to open the way for these activities, and behind these were years of hard work by all concerned with family health and welfare to bring about just such circumstances, and direction and purpose and planning which enable the wise use of the fortunate situation when it finally occurred. To the leaders and workers who have for long devoted their thought and labor to attack on the barriers of silence and ignorance which, we may hope, are now definitely beginning to break down, belong the praise and the credit and the gratitude of posterity. And in the exultation of the moment over the possibility of actually conquering syphilis at last, it is not forgotten that other phases of the social hygiene program—among them education for marriage and parenthood, the repression of prostitution, and the prevention of sex delinquency—have played and must continue to play, an important part in the programs and benefits of the future.

As the agency serving as a national clearing house, the Association and its staff as workers in the ranks, take pleasure in presenting this brief review, and in behalf of the social hygiene societies and the communities for which they labor, we thank all who have helped in any way in the year's progress, and bespeak their coöperation in the days to come.\*

#### "AMATEUR" AND BRANCH NIGHT

##### Los Angeles County Medical Association Institutes Unique Entertainment Feature

Standing room only! Everybody was out to see colleagues "do their stuff."

Amateur and Branch Night at the Los Angeles County Medical Association on Thursday evening, March 4, packed the Lounge.

This unique evening of entertainment, which brought many members of the branches and their families to the Association, began with a dinner in the Association headquarters, at which there were 160 guests.

Following the dinner the president, Dr. John P. Nuttall, introduced the master of ceremonies for the evening, Dr. D. G. Tollefson. Much credit goes to Doctor Tollefson and his physician associates who took part in the program, and who were responsible for making the evening a great success.

Doctor Tollefson, as a preliminary and unannounced skit, called upon the secretaries of the branches to answer certain questions relative to those parts of Los Angeles County in which their respective branches functioned. Some of these were pertinent and humorous questions. The secretaries, however, faced the ordeal without flinching, and some came through victorious. The "talent display" from the various geographical branches was then brought forward.

First was the presentation of the Alhambra branch: Doctor Eugene S. Maxson's rendition of two poems by Kipling—"Gunga Din" and "Boots"—winning much applause.

Dr. Marvel Beem of Santa Monica—Doctor Beem, by the way, has a splendid voice—opened the program for the Santa Monica branch with songs of the type that Lawrence Tibbett likes to sing. Dr. R. J. Morrison's impersonation of Harry Lauder—costume, coughs, cane and all—was fine entertainment. Dr. John Bergmann, the accompanist, completed the Santa Monica act.

The Pasadena branch for years has been hiding the ability of its professional men in ballet technique. Ballet costumes are intriguing on the male form. They created a picture filled with movement and of beauty that certainly never could have been imagined by anyone who was not fortunate enough to see it. So graceful was their interpretation of a difficult Russian dance that they were

presented with a gorgeous vegetable bouquet, which expressed the appreciation of some of their admirers. Doctors Robert K. Gustafson, Lyle G. Craig, Ralph E. Netzel, and Russell M. Decker made up the ballet, the accompanist being Doctor Decker.

Because Amateur Night happened to fall upon the same night as the Speakers' Bureau, the Master of Ceremonies called for remarks from the Speakers' Bureau, pertinent to the work of that Bureau.

Dr. H. O. Barnes, scheduled for a talk at the Speakers' Bureau meeting, must be given credit for arising to a very difficult situation when he was called upon by the Master of Ceremonies to give his talk. Doctor Barnes in doing this set an example for all who aspire to address public gatherings. To be a good speaker, one must be prepared, of course, at all times, to get on one's feet, and even when the spirit that surrounds one is of levity, to be able to command attention—this Doctor Barnes did.

Doctors George B. Kryder, S. H. Welch, F. E. Poole, Fred W. Loring, Orrie Ghrist, and William M. Gibbs made up the Glendale troupe, announced as the "Choral Society of Glendale," otherwise known as the "Disturb-ers." To describe this act one has to use the term "burlesque." The theme of the show was a sponsored radio broadcast.

Dr. Clinton D. Hubbard of Huntington Park mystified the audience by pulling white rabbits out of hats, and other feats of magic. Much applause greeted this presentation of the southeast branch.

From Pomona came a male quartet: Doctors H. C. Anderson, C. A. Arneson, C. W. White, M. R. Jones, and Elwin Welch, in blackface. Good voices all and fine entertainment.

Long Beach, one of the largest branches, depended upon only two of its members to uphold the honors of that branch. But the Branch had reason for its confidence in these two doctors—Raymond Swinney and R. T. Uhls. The act opened with the singing of "Frankie and Johnny," with guitar accompaniment by Doctor Uhls. The setting was of an older time in a small town in Iowa and a medicine show. Doctor Swinney, as Dr. I. Curem, gave a most realistic portrayal of the old-time Medicine Man exhorting "Bray-zilian Oil" and cure-alls of various types for the cure of man and beasts. Yes, this was an act.

Nearly four hundred members attended the show. It was one of the biggest gatherings at the Association since the opening of the headquarters building several years ago.

#### EXPERT WITNESSES\*

By EDWARD C. KRAUSS

The old controversy about expert witnesses has been revived by the publication, *CALIFORNIA AND WESTERN MEDICINE*, with a brand-new suggestion—that members of the medical profession refuse to testify as experts unless appointed by the Court.

California law provides for the appointment of experts by the Court for both civil and criminal cases, but also permits the testimony of experts hired by either or both sides. The courts have frequently used the power to appoint experts in criminal cases, but they rarely appear in civil cases; with the result that personal injury suits, in particular, seem to be battles between groups of experts open to the suspicion of being partisans of either plaintiff or defendant.

No self-respecting medical man wants to be put in this position, say Doctors H. D. Barnard and George E. Tucker in the publication referred to, but there is no agreement as to how the situation can be avoided. The suggestion that they decline to appear except when appointed by the Court is made by Dr. Andrew S. Lobingier, who originally suggested the present California statute permitting court appointment.

The law provides all that is needed, in the opinion of Doctor Lobingier; what is at fault is the apathy of judges in exercising their privilege. But if the judges will not act, the medical men can, since there is no compulsion upon experts to give testimony. A witness may be re-

\* From the American Social Hygiene Association.

\* Editorial, *Los Angeles Times*, March 3, 1937.

quired to testify as to facts, but expert witnesses give opinions, not facts.

The belief that in many cases expert testimony is a purchasable commodity, is possibly only too well grounded, and the California statute providing for naming of disinterested experts by the trial court, plus Doctor Lobin-gier's suggestion, seems to offer a practicable way out.

If the medical profession adopts this suggestion, it will lead the way in a general housecleaning of the expert-witness field. It is a place in which reform is unquestionably needed.

## SYNOPSIS OF MALPRACTICE

By WILLIAM M. RAINS, LL.B.\*  
Los Angeles

(With apologies to H. L. Tidy, M. D., and his celebrated "Synopsis of Medicine.")

(*Tic douloureux*) (*Bury-Bury*) (*Mistake*)

### MALPRACTICE

An acute infectious disease transmissible mainly to physicians and surgeons, only by the excreta of former patients, characterized by severe pain and prolonged sequelae. Rarely fatal.

**Etiology.**—Virus unknown, principally affects busy doctors; ultra-careful and conservative practitioners not immune. Endemic throughout North America, particularly United States of America. Degree of infectivity high when exposed to carriers of bacillus avaritia.

**Symptoms.**—(a) Incubation period: One year from exposure, sometimes called "Statute of Limitations."

(b) Premonitory period: Usually two to eleven months, crystallized by sudden chill upon contact with patient, ordinarily in connection with latter's simulated bill-uselessness.

(c) Clinical period and eruption: Generally during last days of incubation period coincident with premature, too radical treatment of patient's neglect to pay bill.

**Characteristics of Clinical Stage.**—(a) Eruptions, asymmetrical and varicolored, but always identifiable by court summons and complaint and invariably accompanied by a pimply rash in the form of a process server.

(b) Excruciating hyperesthesia in the region of the gluteus maximus, and splenius colli. Also frequently red spots before the eyes, and set teeth on edge.

**Chronic Stage.**—May continue six months to five years. A pyrexia syndrome occurs during this stage if the disease is at all activated, the culmination of the febrile parabola always manifesting itself in direct relation to the time of appearance of the "victim" in a court proceeding.

**Course and Prognosis.**—If early treatment can be obtained, the uncomplicated disease usually smothers in its own excreta. The prognosis is markedly good if there has been a generally effective starvation of the "bacillus avaritia."

**Prophylaxis.**—(1) Do not (unless necessary) sue for fees until one year has elapsed from the date of last treatment. Patients ordinarily have only one year within which to sue for malpractice. Doctors have at least two years within which to sue for fees. If patient is a minor, the rule is different; consult counsel.

(2) Pay or no pay, a private physician is equally responsible in law, therefore, insist on cooperation of the patient in all reasonably required respects, such as x-rays and laboratory analyses; otherwise demand acceptance of public facilities and release of responsibility.

(3) Do not criticize the doctor who precedes on a case. The problem may have appeared distinctly or subtly different to him. Remember, if your successor follows this paragraph faithfully, your *sincerest* though perhaps most *futile* efforts will be accounted sympathetically.

(4) Do not experiment on a live patient. Risks likely to be dangerous to a patient provoked by experiment are incompatible with the law. Therefore, to avoid legal responsibility for damage, refrain from doing that which the ordinarily prudent practitioner of average skill would not

do under similar circumstances, and be diligent to do at least those things which a reasonably prudent practitioner would consider indicated under similar circumstances.

If this rule is followed, bad results do not support legal responsibility.

(5) Do not be brutal. "Offensiveness" is *not* the best "defense" to impending trouble with a patient. On the contrary, kindness, solicitude, understanding, and, surprisingly often, consultation will ward off lurking trouble.

**Treatment.**—(a) Aromatic spirits, care, and caution 1 oz. t. i. d., p. c.

(b) Sweet oil of charity q. s. for articulating surfaces with other doctors.

(c) Isolation of case records and x-rays.

(d) Absolute quiet, abstention from further exposure to source of infection or carrier.

(e) When examined in court be frank, modest, sympathetic, professional. Avoid inclinations to rancor or debate. (Let counsel carry latter burdens.)

**Morbid Anatomy.**—Though this disease is only rarely fatal, there is one outstanding histologic sequela, to wit: Proliferation and desquamation of the cortex of the "glans reputation."

Thus, it is well to follow the prophylactic admonitions wherever possible if this unfortunate result is to be avoided to yourself or your fellow practitioner.

## THE PAY-PATIENT PLAN SHOULD NOT BE APPROVED\*

An assembly committee has tabled a bill by Assemblyman S. L. Heisinger of Fresno County, seeking to amend the Political Code to open the doors of county hospitals to "pay" patients on permission of the county supervisors.

That was a good move.

Sacramento County once had such a system. But when the new county charter was adopted it was abolished, because experience had shown it to be limited to individual benefits, but *costly to the taxpayers*.

To get rid of the abuses developed thereunder, the county charter specifically provides:

The Sacramento County Hospital shall be maintained for Sacramento County indigents only.

On July 1 of this year this system will have been in operation for a period of four years. Suggestions have been made from time to time that it be modified—most of them brought forward by interested office holders—but they have failed to gain any appreciable support from the public.

The reason is obvious.

The people have found the present *modus operandi* satisfactory and at the same time they have not been called on to contribute large amounts in taxes to pay for medical attention and hospital care for those well able to provide for themselves otherwise.

What is the aim and purpose of a county hospital?

It is to see to it that the unfortunate and the needy are not denied medical service; that they shall not die or suffer needlessly because they do not have the means to pay for medical or hospital care.

The people are perfectly willing to supply through taxation sufficient money to support such institutions. But they are not in favor of county hospitals whose doors will be thrown open to those with political influence and pull on the "pay" theory. Experience has shown that such "pay" is more often than not a delusion—a promise seldom expected to be fulfilled.

The Legislature will do well to leave the final decision of the policy in such matters to the counties themselves.

\*From the Sacramento Bee. An editorial in March 15, 1937, issue.

\* Member of the Los Angeles Bar.



## TWENTY-FIVE YEARS AGO†

### EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. X, No. 4, April, 1912

From Some Editorial Notes:

**Record Your Certificate.**—To practice medicine legally in this State you must first get a license from the State Board of Medical Examiners and then have that license, or certificate, recorded in the county in which you reside and practice. The recording of the license is made as much a part of the law as the getting of it, and it is just as important. The Board of Examiners has found that this provision of the law has been very generally overlooked by a considerable number of physicians. . . .

**Another Why?**—Last month the JOURNAL published some editorial notes relating to distinguished physicians who had contributed articles to publications which continue to advertise nostrums and frauds that have been shown up. These remarks have created some little comment which, so far as it has come to the attention of the JOURNAL, has been entirely favorable. We shall continue to refer to the subject from time to time. In the *American Journal of Urology* for February, 1912, there is an article by Dr. ———, a distinguished physician of San Francisco and for many years a prominent member of our Society. In the same issue of that medical (?) journal are to be found the following advertisements: ergoapiol, antiphlogistine, glycothymoline, peptomangan, glycoheroin, antheol, and dioradin. The list is not so large as some, but that is probably because the publication is a special one and, doubtless, has but a limited circulation. Does Dr. ——— know anything about the things that that journal advertises? . . .

**Hydrophobia.**—Interest in rabies has been greatly intensified by its suddenly becoming prevalent in San Francisco. During the month of February many dogs developed the characteristic symptoms and a number of human beings were bitten. Proof of the presence of rabies was secured in many cases by the demonstration of Negri bodies in the ganglion cells of the brain tissue, and in some instances by the production of the disease in laboratory animals, through inoculation. The examinations were made in the State Hygienic Laboratory in Berkeley, in the laboratory of the San Francisco Health Department, and in the laboratory of the Letterman General Hospital at the Presidio.

The State Board of Health has done much to minimize the number of human deaths by providing Pasteur treatment with United States Government virus for the people who have been bitten by rabid animals and are unable to be immunized at their own expense. . . .

From an Article on "The Life of Radium and Its Therapeutic Use in Internal Medicine" by E. O. Jellinek, M.D., San Francisco.—You remember, that if you force a sufficient electric current through the so-called Crookes tube that this tube will display some characteristic light effects around the anode and the cathode. As the light effects displayed around the cathode are the only ones which have any bearing on the subject which we intend to investigate tonight, I will ask your permission to recall in a few words the phenomena displaying themselves around this terminal. . . .

From an Article on "A General Consideration of Some Points of Interest in the Diagnosis and Treatment of Syphilis" by George D. Culver, M.D., San Francisco.—Schaudinn and Hoffman's discovery of the Spirocheta pallida, Wassermann's application of the complement—

(Continued in Front Advertising Section, Page 17)

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

## BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M.D.  
Secretary-Treasurer

### News

"Alleging that [I.] Jesse Citron, Hemet physician, retarded his recovery when he was ill with pneumonia last summer and that \$12,000 is not a 'reasonable and proper' fee for medical services, W. C. Fields, screen comedian, last Friday filed a counterclaim against the physician, asking \$25,000 damages. Doctor Citron seeks to collect \$12,000 through the courts for medical services said to have been rendered the film star during his illness. According to the cross complaint filed by the screen star in Riverside County Court, Doctor Citron 'wilfully treated the defendant in such a way as materially to retard the recovery of defendant; that plaintiff administered certain drugs and medicines to defendant which plaintiff well knew would retard recovery' of Fields. . . . Filed on January 11, the plaintiff's original complaint maintained he had labored twenty-five days and nights continuously and had 'completely cured' the actor. For such services the \$12,000 was declared a 'reasonable' fee. . . ." (*Hemet News*, February 26, 1937.)

"Al Williams, who advertises himself as a 'Conditioner of Men' at his offices in the Spring Arcade Building, overstepped bounds when he made actual medical diagnoses, according to charges yesterday in Municipal Judge Arthur Guerin's court. Williams went on trial accused of violating the State Medical Practice Act. Andrew Anagnos, bank clerk, testified Williams told him he was suffering from high blood pressure and could cure him in three months with three treatments a week for \$200. Anagnos paid Williams \$50, took nine treatments and was 'all tired out.' John Ronan, Inspector for the State Medical Board, testified Williams diagnosed his condition as serious, asserting he was suffering from heart disease. Ronan claims physicians state he is in perfect health." (*Los Angeles Illustrated Daily News*, March 6, 1937.) Acting Special Agent Ronan reported that following a jury trial, Al Williams was found guilty March 8, whereupon motion for a new trial was filed.

Our Investigation Department reports that J. Bruce Clark, D. C., said to be an office associate of Al Williams, on February 2, 1937, pleaded guilty to a charge of violation of the Chiropractic Act and on February 9 was sentenced to pay a fine of \$100 or serve fifty days in the city jail, the sentence being suspended and defendant placed on probation for one year.

"Dr. Jacques P. Gray, First Assistant Director of Public Health in San Francisco for the past seven years, will leave the San Francisco department early in April. He will accept a dual position of principal health officer and manager of the Angeline Elizabeth Kirby Memorial Health Center in Wilkesbarre, Pennsylvania. . . ." (*San Francisco Examiner*, March 9, 1937.)

"Superior Judge M. C. Glenn today upheld the right of the State Board of Medical Examiners to cancel the license of a physician for performing an illegal operation. Judge Glenn denied the petition for a writ of review, which was filed by Dr. George W. O'Donnell, San Francisco physician, who sought to annul the Board's order canceling his license." (*Associated Press dispatch*, dated Sacramento, March 2, and printed in the *Oakland Tribune*, March 2, 1937.)

(Continued in Front Advertising Section, Page 17)

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.